

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1600RXA

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	MAY 01	New CAS web site launched
NEWS	3	MAY 08	CA/CAPplus Indian patent publication number format defined
NEWS	4	MAY 14	RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS	5	MAY 21	BIOSIS reloaded and enhanced with archival data
NEWS	6	MAY 21	TOXCENTER enhanced with BIOSIS reload
NEWS	7	MAY 21	CA/CAPplus enhanced with additional kind codes for German patents
NEWS	8	MAY 22	CA/CAPplus enhanced with IPC reclassification in Japanese patents
NEWS	9	JUN 27	CA/CAPplus enhanced with pre-1967 CAS Registry Numbers
NEWS	10	JUN 29	STN Viewer now available
NEWS	11	JUN 29	STN Express, Version 8.2, now available
NEWS	12	JUL 02	LEMBASE coverage updated
NEWS	13	JUL 02	LMEDLINE coverage updated
NEWS	14	JUL 02	SCISEARCH enhanced with complete author names
NEWS	15	JUL 02	CHEMCATS accession numbers revised
NEWS	16	JUL 02	CA/CAPplus enhanced with utility model patents from China
NEWS	17	JUL 16	CAPplus enhanced with French and German abstracts
NEWS	18	JUL 18	CA/CAPplus patent coverage enhanced
NEWS	19	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	20	JUL 30	USGENE now available on STN
NEWS	21	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	22	AUG 06	BEILSTEIN updated with new compounds
NEWS	23	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	24	AUG 13	CA/CAPplus enhanced with additional kind codes for granted patents
NEWS	25	AUG 20	CA/CAPplus enhanced with CAS indexing in pre-1907 records
NEWS EXPRESS	29 JUNE 2007:	CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.	
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS LOGIN	Welcome Banner and News Items		
NEWS IPC8	For general information regarding STN implementation of IPC 8		

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 11:44:34 ON 21 AUG 2007

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 11:44:46 ON 21 AUG 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 AUG 2007 HIGHEST RN 945102-95-4

DICTIONARY FILE UPDATES: 20 AUG 2007 HIGHEST RN 945102-95-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

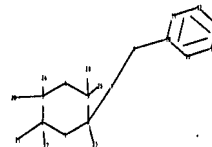
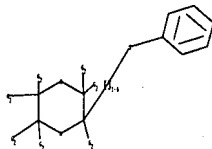
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\QUERIES\10524650.str



```

chain nodes :
7  8  20 21  23  24  25  26  27
ring nodes :
1  2  3  4  5  6  10  11  12  13  14  15
chain bonds :
2-21  2-27  3-20  3-26  5-24  5-25  6-7  6-23  7-8  8-10
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  10-11  10-15  11-12  12-13  13-14  14-15
exact/norm bonds :
1-2  1-6  2-3  2-21  2-27  3-4  3-20  3-26  4-5  5-6  5-24  5-25  6-23  7-8  8-10
exact bonds :
6-7
normalized bonds :
10-11  10-15  11-12  12-13  13-14  14-15
isolated ring systems :
containing 1 : 10 :

```

G1:O,S

G2:C,H

Match level :

```

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 20:CLASS 21:CLASS 23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS

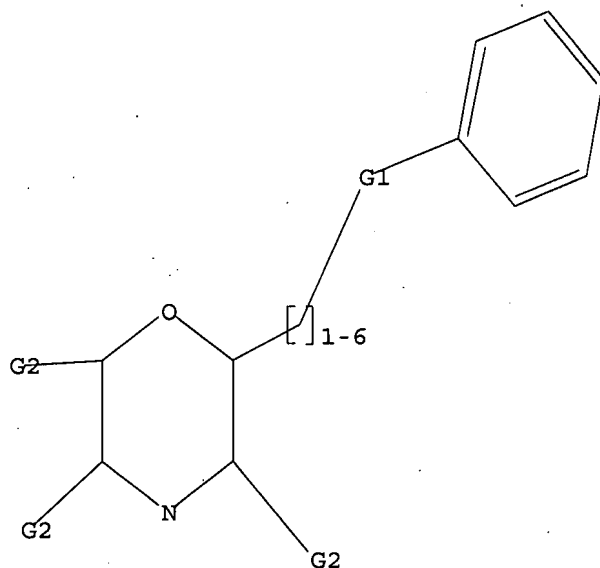
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L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



G1 O,S

G2 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 11:45:00 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 3503 TO ITERATE

57.1% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 66511 TO 73609
PROJECTED ANSWERS: 1576 TO 2836

L2 50 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 11:45:04 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 70762 TO ITERATE

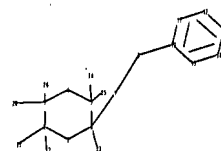
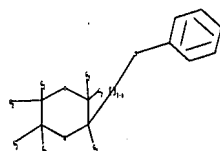
100.0% PROCESSED 70762 ITERATIONS 2633 ANSWERS
SEARCH TIME: 00.00.01

L3 2633 SEA SSS FUL L1

=> s l3 and caplus/lc
55044450 CAPLUS/LC
L4 1717 L3 AND CAPLUS/LC

=> s l3 not l4
L5 916 L3 NOT L4

=>
Uploading C:\Program Files\Stnexp\Queries\QUERIES\10524650.str



chain nodes :
7 8 20 21 23 24 25 26 27

```

ring nodes :
1  2  3  4  5  6  10  11  12  13  14  15
chain bonds :
2-21  2-27  3-20  3-26  5-24  5-25  6-7  6-23  7-8  8-10
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  10-11  10-15  11-12  12-13  13-14  14-15
exact/norm bonds :
1-2  1-6  2-3  2-21  2-27  3-4  3-20  3-26  4-5  5-6  5-24  5-25  6-23  7-8  8-10
exact bonds :
6-7
normalized bonds :
10-11  10-15  11-12  12-13  13-14  14-15
isolated ring systems :
containing 1 : 10 :

```

G1:O,S

G2:C,H

Match level :

```

1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:CLASS  8:CLASS  10:Atom  11:Atom
12:Atom  13:Atom  14:Atom  15:Atom  20:CLASS  21:CLASS  23:CLASS  24:CLASS
25:CLASS  26:CLASS  27:CLASS

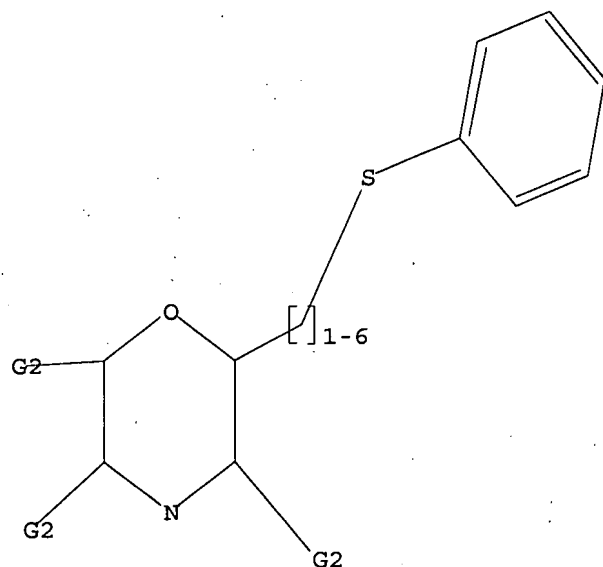
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L6 STRUCTURE UPLOADED

=> d

L6 HAS NO ANSWERS

L6 STR



G1 O,S

G2 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 16 subset=13 full

FULL SUBSET SEARCH INITIATED 11:47:01 FILE 'REGISTRY'

FULL SUBSET SCREEN SEARCH COMPLETED -

175 TO ITERATE

100.0% PROCESSED 175 ITERATIONS
SEARCH TIME: 00.00.01

156 ANSWERS

L7 156 SEA SUB=L3 SSS FUL L6

=> s 17 and caplus/lc
 55044450 CAPLUS/LC

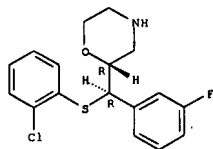
L8 141 L7 AND CAPLUS/LC

=> s 17 not 18
L9 15 L7 NOT L8

=> d 19 1-15

L9 ANSWER 1 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 792906-10-6 REGISTRY
 ED Entered STN: 06 Dec 2004
 CN Morpholine, 2-[(R)-[(2-chlorophenyl)thio](3-fluorophenyl)methyl]-, (2R)-
 (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C17 H17 Cl F N O S
 CI COM
 SR CA

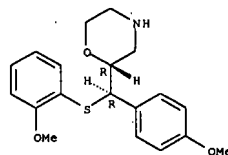
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 2 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 771474-87-4 REGISTRY
 ED Entered STN: 28 Oct 2004
 CN Morpholine, 2-[(R)-[(4-methoxyphenyl)thio]methyl]-, (2R)-
 (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C19 H23 N O3 S
 CI COM
 SR CA

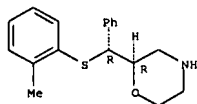
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 3 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 769118-75-4 REGISTRY
 ED Entered STN: 26 Oct 2004
 CN Morpholine, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA
 INDEX NAME)
 FS STEREOSEARCH
 MF C18 H21 N O S
 CI COM
 SR CA

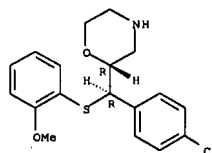
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

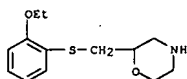
L9 ANSWER 4 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 764647-04-3 REGISTRY
 ED Entered STN: 18 Oct 2004
 CN Morpholine, 2-[(R)-[(4-chlorophenyl)thio]methyl]-, (2R)-
 (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C18 H20 Cl N O2 S
 CI COM
 SR CA

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

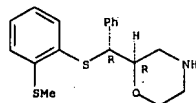
L9 ANSWER 5 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 763025-85-0 REGISTRY
 ED Entered STN: 15 Oct 2004
 CN Morpholine, 2-[[2-(ethoxyphenyl)thio]methyl]- (9CI) (CA INDEX NAME)
 MF C13 H19 N O2 S
 CI COM
 SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 6 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 761399-99-9 REGISTRY
 ED Entered STN: 13 Oct 2004
 CN Morpholine, 2-[(R)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2R)- (9CI)
 (CA INDEX NAME)
 FS STEREOSEARCH
 MF C18 H21 N O S2
 CI COM
 SR CA

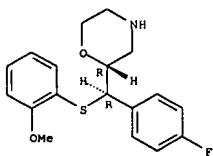
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 7 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 757186-65-5 REGISTRY
 ED Entered STN: 06 Oct 2004
 CN Morpholine, 2-[(R)-[4-(4-fluorophenyl)[2-(methoxyphenyl)thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C18 H20 F N O2 S
 CI COM
 SR CA

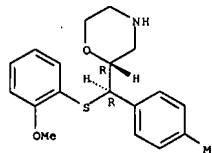
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 8 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 748131-49-9 REGISTRY
 ED Entered STN: 20 Sep 2004
 CN Morpholine, 2-[(R)-[2-(2-methoxyphenyl)thio](4-methylphenyl)methyl]-, (2R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C19 H23 N O2 S
 CI COM
 SR CA

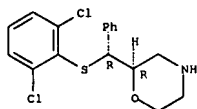
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

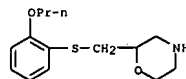
L9 ANSWER 9 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 742694-31-1 REGISTRY
 ED Entered STN: 12 Sep 2004
 CN Morpholine, 2-[(R)-[(2,6-dichlorophenyl)thio]phenylmethyl]-, (2R)- (9CI)
 (CA INDEX NAME).
 FS STEREOSEARCH
 MF C17 H17 Cl2 N O S
 CI COM
 SR CA

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

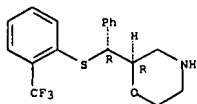
L9 ANSWER 10 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 741197-13-7 REGISTRY
 ED Entered STN: 07 Sep 2004
 CN Morpholine, 2-[[[(2-propoxyphenyl)thio]methyl]- (9CI) (CA INDEX NAME)
 MF C14 H21 N O2 S
 CI COM
 SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 11 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 733737-99-0 REGISTRY
 ED Entered STN: 27 Aug 2004
 CN Morpholine, 2-[(R)-phenyl[[2-(trifluoromethyl)phenyl]thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C18 H18 F3 N O S
 CI COM
 SR CA

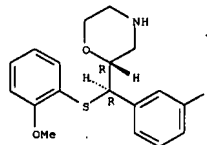
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

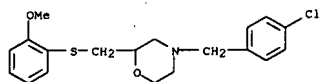
L9 ANSWER 12 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 695815-31-7 REGISTRY
 ED Entered STN: 18 Jun 2004
 CN Morpholine, 2-[(R)-[(3-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C18 H20 F N O2 S
 CI COM
 SR CA

Absolute stereochemistry.



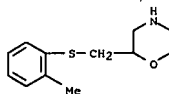
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 13 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 203662-19-5 REGISTRY
 ED Entered STN: 09 Apr 1998
 CN Morpholine, 4-[[4-(4-chlorophenyl)methyl]-2-[[2-(methoxyphenyl)thio]methyl]-
 (9CI) (CA INDEX NAME)
 MF C19 H22 Cl N O2 S
 CI COM
 SR CA



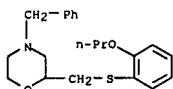
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L9 ANSWER 14 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 55723-00-7 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Morpholine, 2-[[2-(2-methylphenyl)thio]methyl]- (9CI) (CA INDEX NAME)
 MF C12 H17 N O S
 CI COM
 LC STN Files: BEILSTEIN*
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

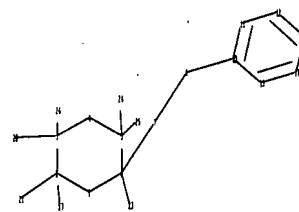
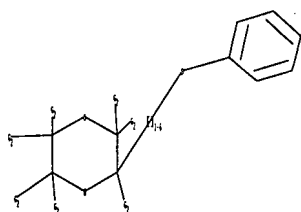
L9 ANSWER 15 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 55710-07-1 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Morpholine, 4-(phenylmethyl)-2-[[2-(2-propoxyphenyl)thio]methyl]- (9CI)
 (CA INDEX NAME)
 MF C21 H27 N O2 S
 CI COM
 LC STN Files: BEILSTEIN*
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=>

Uploading C:\Program Files\Stnexp\Queries\QUERIES\10524650.str



L10 STRUCTURE UPLOADED

=> s l10

SAMPLE SEARCH INITIATED 11:55:25 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 22 TO ITERATE

100.0% PROCESSED 22 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 159 TO 721

PROJECTED ANSWERS: 0 TO 0

L11 0 SEA SSS SAM L10

=> s l10 full

FULL SEARCH INITIATED 11:55:29 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 505 TO ITERATE

100.0% PROCESSED 505 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

L12 3 SEA SSS FUL L10

=> s l12 and caplus/lc

55044450 CAPLUS/LC

L13 3 L12 AND CAPLUS/LC

=> s l13

L14 1 L13

=> d ibib abs hitstr

L14 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006.1157352 CAPLUS

DOCUMENT NUMBER: 145:471547

TITLE: Preparation of morpholinobenzothiazoles and related compounds as phosphoinositide 3 kinase (PI3K) inhibitors

INVENTOR(S): Alexander, Rikki Peter; Aujla, Pavandeep; Batchelor, Mark James; Brookings, Daniel Christopher; Buckley, George Martin; Crepy, Karen Viviane Lucile; Kulisa, Claire Louise; Turner, James Petrie

PATENT ASSIGNEE(S): UCB S. A., Belg.

SOURCE: PCT Int. Appl., 144pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

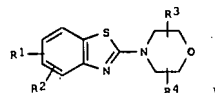
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006114606	A1	20061102	WO 2006-GB1505	20060425
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: GB 2005-8471 A 20050426

OTHER SOURCE(S): MARPAT 145:471547

GI



AB Title compds. [I: X = CO, CS, C(:NOR5), CH(OH), NR5CO, NR6CS, C(:NNH2); R1, R2 = H, (substituted) alkyl, cycloalkyl, cycloalkylalkyl, aryl, aralkyl, heterocycloalkyl, heterocyclylalkyl, heteroaryl, heteroarylalkyl; R1R2, R3R4 = atoms to form rings; R3, R4 = H, (substituted) alkyl, cycloalkyl, cycloalkylalkyl, aryl, aralkyl, aralkenyl, aralkynyl, biarylalkyl, heterocycloalkyl, heteroaryl, heteroarylalkyl, arylheteroarylalkyl, etc.; R5, R6 = H, alkyl], were prepared. Thus, spiro[4.5]decane-7,9-dione in HOAc was treated dropwise with Br2 to give

a crude product which was heated with morpholine-4-carbothioamide (preparation

L14 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L14 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

given) and diisopropylethylamine in THF to give 21 2-(morpholin-4-yl)-4H-spiro[1,3-benzothiazole-5,1'-cyclopentan]-7(6H)-one. I showed binding affinity of $\leq 50 \mu\text{M}$ for human PI3K isoforms.

IT 913717-19-8P

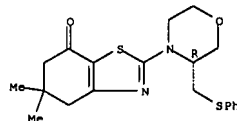
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of morpholinobenzothiazoles and related compds. as phosphoinositide 3 kinase (PI3K) inhibitors)

RN 913717-19-8 CAPLUS

CN 7(4H)-Benzothiazolone, 5,6-dihydro-5,5-dimethyl-2-[(3R)-3-[(phenylthio)methyl]-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 913718-69-1P, (3R)-4-[(4-Methoxybenzyl)-3-

[(phenylthio)methyl]morpholine 913718-70-4P,

(3R)-3-[(Phenylthio)methyl]morpholine

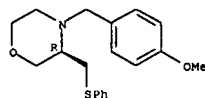
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of morpholinobenzothiazoles and related compds. as phosphoinositide 3 kinase (PI3K) inhibitors)

RN 913718-69-1 CAPLUS

CN Morpholine, 4-[(4-methoxyphenyl)methyl]-3-[(phenylthio)methyl]-, (3R)- (9CI) (CA INDEX NAME)

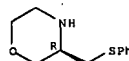
Absolute stereochemistry.



RN 913718-70-4 CAPLUS

CN Morpholine, 3-[(phenylthio)methyl]-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 11:44:34 ON 21 AUG 2007)

FILE 'REGISTRY' ENTERED AT 11:44:46 ON 21 AUG 2007

L1 STRUCTURE UPLOADED
L2 50 S L1
L3 2633 S L1 FULL
L4 1717 S L3 AND CAPLUS/LC
L5 916 S L3 NOT L4
L6 STRUCTURE UPLOADED
L7 156 S L6 FULL SUB=L3
L8 141 S L7 AND CAPLUS/LC
L9 15 S L7 NOT L8
L10 STRUCTURE UPLOADED
L11 0 S L10
L12 3 S L10 FULL
L13 3 S L12 AND CAPLUS/LC

FILE 'CAPLUS' ENTERED AT 11:55:36 ON 21 AUG 2007

L14 1 S L13

=> s 18

L15 15 L8

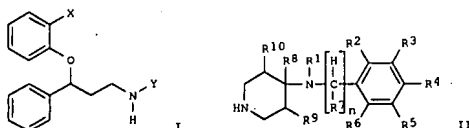
=> d ibib abs hitstr 1-15

L15 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

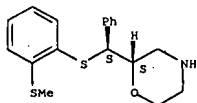
ACCESSION NUMBER: 2005:588645 CAPLUS
DOCUMENT NUMBER: 143:115550
TITLE: Preparation of heterocyclic compounds as selective norepinephrine reuptake inhibitors for treating hot flashes, impulse control disorders and personality change due to a general medical condition
INVENTOR(S): Allen, Albert John; Hemrick-Luecke, Susan; Sumner, Calvin Russell; Wallace, Owen Brendan
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 337 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005060949	A2	20050707	WO 2004-US38221	20041201
WO 2005060949	A3	20050909		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AE, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2548304	A1	20050707	CA 2004-2548304	20041201
EP 1729754	A2	20061213	EP 2004-811076	20041201
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 1889940	A	20070103	CN 2004-80036841	20041201
CN 2007513945	T	20070531	JP 2006-543830	20041201
US 2007015786	A1	20070118	US 2006-581015	20060530
PRIORITY APPLN. INFO.: US 2003-529428P P 20031212				
WO 2004-US38221 W 20041201				

OTHER SOURCE(S): MARPAT 143:115550
G1

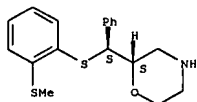


L15 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 668470-58-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl-, (2S)- (9CI) (CA INDEX NAME)

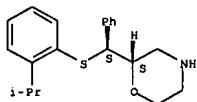
Absolute stereochemistry.



• HCl

RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L15 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

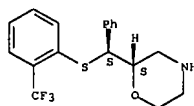
AB The invention relates to a method of preventing or treating hot flashes, vasomotor symptoms, impulse control disorders or personality change due to a general medical condition, comprising administering to a patient in need thereof a therapeutically effective amount of a selective norepinephrine reuptake inhibitor selected from atomoxetine, reboxetine, I [X = alkylthio; Y = alkyl], II [n = 1-3; R1 = alkyl, alkenyl, cycloalkyl, etc.], R2-R4 = H, alkyl, alkoxy, etc.; R5-R6 = H, alkyl, alkoxy, halo; R7-R8 = H, alkyl; R9-R10 = H, halo, OH, CN, alkyl, alkoxy, etc. Over 200 title compds. such as I, II and other heterocyclic compds. disclosed, were prepared E.g., a 2-step synthesis of N-(2-methylpropyl)-N-[(2-fluorophenyl)methyl]piperidin-4-amine fumarate, starting from tert-Bu 4-(2-methylpropylamino)piperidine-1-carboxylate and 2-fluorobenzaldehyde, was given. The preferred exemplified title compds. exhibit a Ki value less than 1 μ M, more preferably less than 500 nM at the norepinephrine transporter as determined using the scintillation proximity assay.

IT 668470-56-2P 668470-57-3P 668470-58-4P
668470-59-5P 668470-60-8P 668470-61-9P
668470-62-0P 668470-63-1P 668470-64-2P
668470-65-3P 668470-66-4P 668470-67-5P
668470-68-6P 668470-69-7P 668470-70-0P
668470-71-1P 668470-72-2P 668470-73-3P
668470-74-4P 668470-76-6P 668470-77-7P
668470-78-8P 668470-79-9P 668470-80-2P
668470-81-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heterocyclic compds. as selective norepinephrine reuptake inhibitors for treating hot flashes, impulse control disorders and personality change due to general medical condition)

RN 668470-56-2 CAPLUS
CN Morpholine, 2-[(S)-phenyl][2-(trifluoromethyl)phenyl]thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

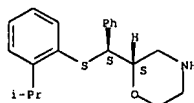
Absolute stereochemistry.



RN 668470-57-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

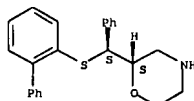
L15 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



• HCl

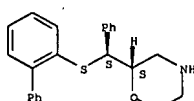
RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-62-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

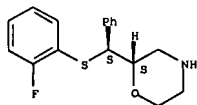
Absolute stereochemistry.



• HCl

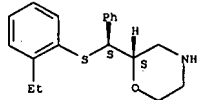
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



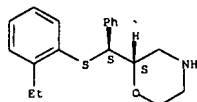
RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[2-ethylphenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-65-3 CAPLUS
CN Morpholine, 2-[(S)-[2-ethylphenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

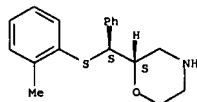
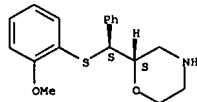
Absolute stereochemistry.



• HCl

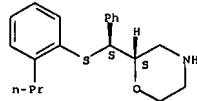
RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-[2-methoxyphenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



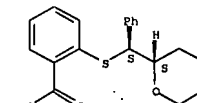
RN 668470-71-1 CAPLUS
CN Morpholine, 2-[(S)-phenyl[2-propylphenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-72-2 CAPLUS
CN Benzoic acid, 2-[(S)-(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

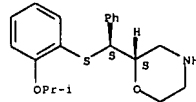


RN 668470-73-3 CAPLUS
CN Benzoic acid, 2-[(S)-(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

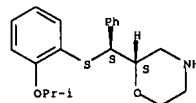
RN 668470-67-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-68-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

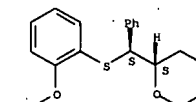
Absolute stereochemistry.



• HCl

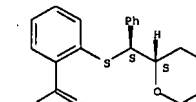
RN 668470-69-7 CAPLUS
CN Morpholine, 2-[(S)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-70-0 CAPLUS
CN Morpholine, 2-[(S)-[2-methylphenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

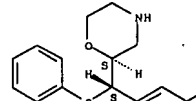
Absolute stereochemistry.



• HCl

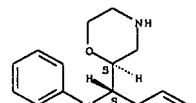
RN 668470-74-4 CAPLUS
CN Morpholine, 2-[(S)-(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



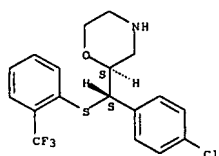
RN 668470-76-6 CAPLUS
CN Morpholine, 2-[(S)-(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-77-7 CAPLUS
CN Morpholine, 2-[(S)-(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

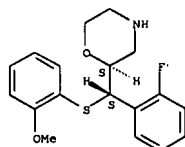
Absolute stereochemistry.



● HCl

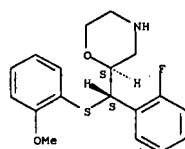
RN 668470-78-8 CAPLUS
CN Morphinolone, 2-[(S)-(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



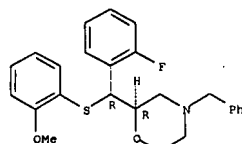
RN 668470-79-9 CAPLUS
CN Morphinolone, 2-[(S)-(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-, hydrochloride, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



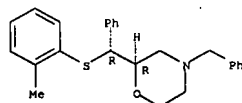
● HCl

RN 668470-80-2 CAPLUS



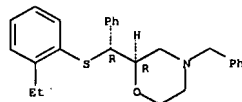
RN 667876-73-5 CAPLUS
CN Morphinolone, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.



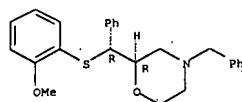
RN 667876-84-8 CAPLUS
CN Morphinolone, 2-[(R)-[(2-ethylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.

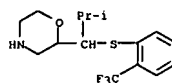


RN 667876-86-0 CAPLUS
CN Morphinolone, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.



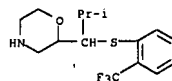
RN 668470-75-5 CAPLUS
CN Morphinolone, 2-[(S)-(3-fluorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-, (2S)-(9CI) (CA INDEX NAME)



RN 668470-81-3 CAPLUS
CN Morphinolone, 2-[(S)-(3-fluorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-, (2S)-(9CI) (CA INDEX NAME)

CM 1

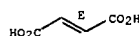
CRN 668470-80-2
CMF C15 H20 F3 N O S



CM 2

CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.

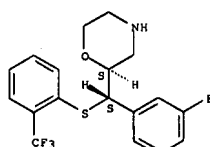


IT 667876-61-1P 667876-73-5P 667876-84-8P
667876-86-0P 668470-75-5P 668470-88-0P
668470-89-1P 668470-90-4P 668470-91-5P
668470-92-6P 668470-95-9P 668470-97-1P
668471-00-9P 668471-02-1P 668471-04-3P
668471-08-7P 847687-22-3P 847687-24-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of heterocyclic compds. as selective norepinephrine reuptake inhibitors for treating hot flashes, impulse control disorders and personality change due to general medical condition)

RN 667876-61-1 CAPLUS
CN Morphinolone, 2-[(R)-[(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2R)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.

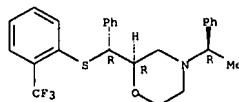
Absolute stereochemistry.



● HCl

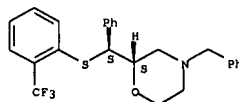
RN 668470-88-0 CAPLUS
CN Morphinolone, 4-[(R)-1-phenylethyl]-2-[(R)-phenyl]-2-(trifluoromethyl)phenylthio]methyl]-, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



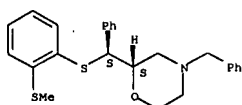
RN 668470-89-1 CAPLUS
CN Morphinolone, 4-[(R)-1-phenylethyl]-2-[(R)-phenyl]-2-(trifluoromethyl)phenylthio]methyl]-, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



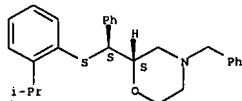
RN 668470-90-4 CAPLUS
CN Morphinolone, 2-[(S)-[(2-methylthio)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



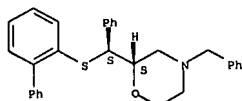
RN 668470-91-5 CAPLUS
CN Morphinolone, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



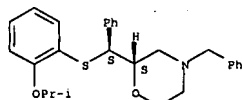
RN 668470-92-6 CAPLUS
CN Morphinolone, 2-[(S)-[1,1'-biphenyl]-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



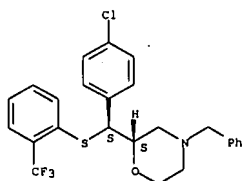
RN 668470-95-9 CAPLUS
CN Morphinolone, 2-[(R)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

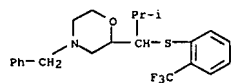


RN 668470-97-1 CAPLUS
CN Morphinolone, 4-(phenylmethyl)-2-[(R)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

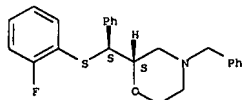


RN 668471-08-7 CAPLUS
CN Morphinolone, 2-[2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



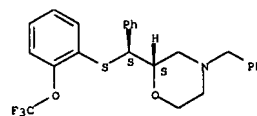
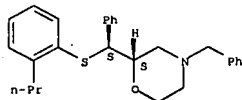
RN 847687-22-3 CAPLUS
CN Morphinolone, 2-[(R)-[2-(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



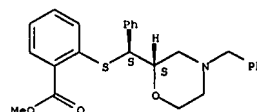
RN 847687-24-5 CAPLUS
CN Morphinolone, 4-(phenylmethyl)-2-[(R)-phenyl[2-propylphenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



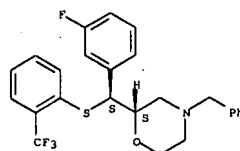
RN 668471-00-9 CAPLUS
CN Benzoic acid, 2-[(R)-phenyl[(2R)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-02-1 CAPLUS
CN Morphinolone, 2-[(R)-[3-fluorophenyl][2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-04-3 CAPLUS
CN Morphinolone, 2-[(R)-[4-chlorophenyl][2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:523264 CAPLUS

DOCUMENT NUMBER: 143:59831

TITLE:

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

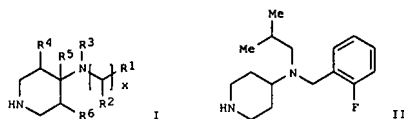
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053663	A2	20050616	WO 2004-US37195	20041124
WO 2005053663	A3	20050811		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

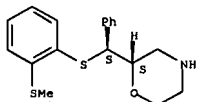
PRIORITY APPLN. INFO.: US 2003-524450P P 20031124
US 2003-524781P P 20031125

OTHER SOURCE(S): MARPAT 143:59831
GI



AB The invention relates to a preparation of aminopiperidine derivs. of formula I
[wherein: x is 1-3; R1 is (un)substituted phenyl; R2 and R5 are independently H or alkyl; R3 is (cyclo)alkyl, alkenyl, or cycloalkylalkyl, etc.; R4 is H, halogen, or OH, etc.; R6 is H, halogen, CN, or alkyl,

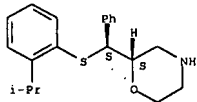
L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



• HCl

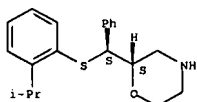
RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



• HCl

RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
etc.), useful for the treatment of cognitive failure. Selective norepinephrine reuptake inhibitors were used to treat cognitive failure. For instance, fumarate salt of aminopiperidine deriv. II was prep. via imination of 2-fluorobenzaldehyde by tert-Bu 4-[(2-methylpropyl)amino]piperidine-1-carboxylate, redn. of the obtained imine, and subsequent fumaric acid salt formation. The preferred invention compds. exhibit K_i values less than 500 nM at the norepinephrine transporter.

IT

668470-56-2P 668470-57-3P 668470-58-4P
668470-59-5P 668470-60-8P 668470-61-9P
668470-62-0P 668470-63-1P 668470-64-2P
668470-65-3P 668470-66-4P 668470-67-5P
668470-68-6P 668470-69-7P 668470-70-0P
668470-71-1P 668470-72-2P 668470-73-3P
668470-74-4P 668470-75-5P 668470-76-6P
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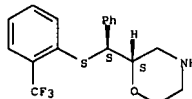
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aminopiperidine derivs. useful for the treatment of cognitive failure)

RN 668470-56-2 CAPLUS

CN Morpholine, 2-[(S)-[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

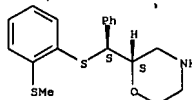
Absolute stereochemistry.



RN 668470-57-3 CAPLUS

CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

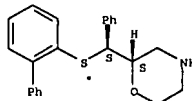


RN 668470-58-4 CAPLUS

CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

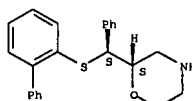
L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 668470-62-0 CAPLUS

CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

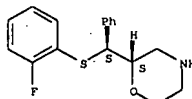


• HCl

RN 668470-63-1 CAPLUS

CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

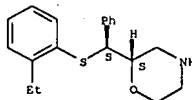
Absolute stereochemistry.



RN 668470-64-2 CAPLUS

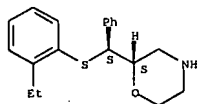
CN Morpholine, 2-[(S)-[2-(ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 RN 668470-65-3 CAPLUS
 CN Morpholine, 2-[(S)-[(2-ethylphenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

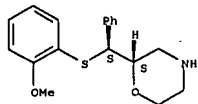
Absolute stereochemistry.



● HCl

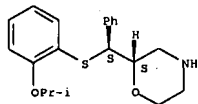
RN 668470-66-4 CAPLUS
 CN Morpholine, 2-[(S)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-67-5 CAPLUS
 CN Morpholine, 2-[(S)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

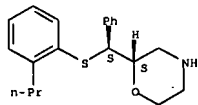
Absolute stereochemistry.



RN 668470-68-6 CAPLUS
 CN Morpholine, 2-[(S)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

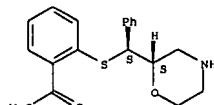
Absolute stereochemistry.

L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



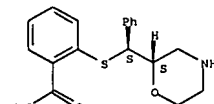
RN 668470-72-2 CAPLUS
 CN Benzoic acid, 2-[(S)-[(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-73-3 CAPLUS
 CN Benzoic acid, 2-[(S)-[(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

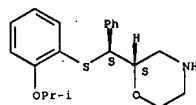


● HCl

RN 668470-74-4 CAPLUS
 CN Morpholine, 2-[(S)-[(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

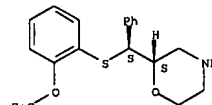
L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

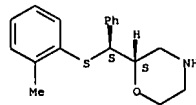
RN 668470-69-7 CAPLUS
 CN Morpholine, 2-[(S)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-70-0 CAPLUS
 CN Morpholine, 2-[(S)-[(2-methylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

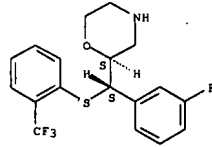
Absolute stereochemistry.



RN 668470-71-1 CAPLUS
 CN Morpholine, 2-[(S)-phenyl[(2-propylphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

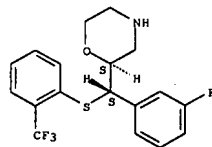
Absolute stereochemistry.

L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 668470-75-5 CAPLUS
 CN Morpholine, 2-[(S)-[(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

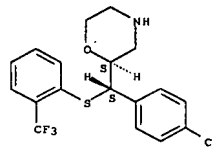
Absolute stereochemistry.



● HCl

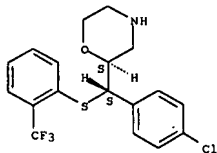
RN 668470-76-6 CAPLUS
 CN Morpholine, 2-[(S)-[(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-77-7 CAPLUS
 CN Morpholine, 2-[(S)-[(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

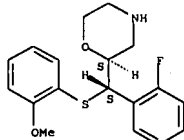
Absolute stereochemistry.



● HCl

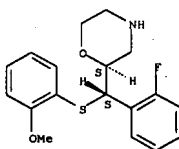
RN 668470-78-8 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



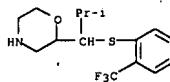
RN 668470-79-9 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

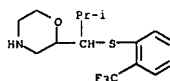
RN 668470-80-2 CAPLUS
 CN Morpholine, 2-[2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]- (9CI) (CA INDEX NAME)



RN 668470-81-3 CAPLUS
 CN Morpholine, 2-[2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

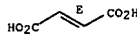
CRN 668470-80-2
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CM 2

CRN 110-17-8
 CMF C4 H4 O4

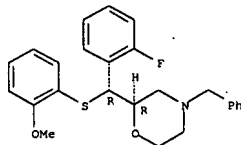
Double bond geometry as shown.



IT 667876-61-1P 667876-73-5P 667876-84-8P
 667876-86-0P 668470-88-0P 668470-89-1P
 668470-90-4P 668470-91-5P 668470-92-6P
 668470-95-9P 668470-97-1P 668471-00-9P
 668471-02-1P 668471-04-3P 668471-08-7P
 847687-22-3P 847687-24-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of aminopiperidine derive. useful for the treatment of cognitive failure)

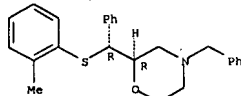
RN 667876-61-1 CAPLUS
 CN Morpholine, 2-[(R)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



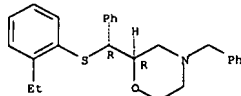
RN 667876-73-5 CAPLUS
 CN Morpholine, 2-[(R)-(2-methylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667876-84-8 CAPLUS
 CN Morpholine, 2-[(R)-(2-ethylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

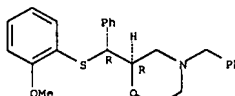
Relative stereochemistry.



RN 667876-86-0 CAPLUS

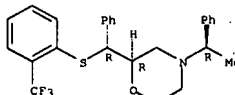
Morpholine, 2-[(R)-(2-methoxyphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



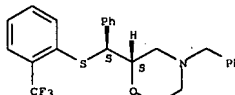
RN 668470-88-0 CAPLUS
 CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl][2-(trifluoromethyl)phenyl]thio]methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



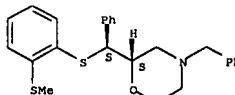
RN 668470-89-1 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl][2-(trifluoromethyl)phenyl]thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



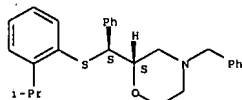
RN 668470-90-4 CAPLUS
 CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



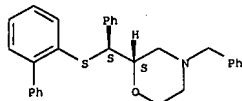
L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 RN 668470-91-5 CAPLUS
 CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



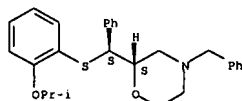
RN 668470-92-6 CAPLUS
 CN Morpholine, 2-[(S)-[1,1'-biphenyl]-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



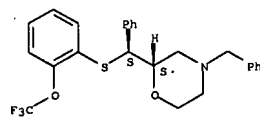
RN 668470-95-9 CAPLUS
 CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

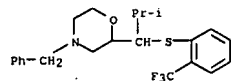


RN 668470-97-1 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

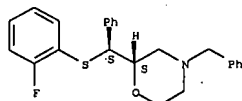


L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 CN Morpholine, 2-[2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



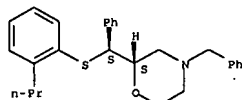
RN 847687-22-3 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 847687-24-5 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(2-propylphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

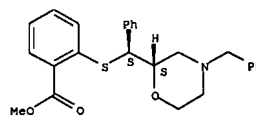
Relative stereochemistry.



L15 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

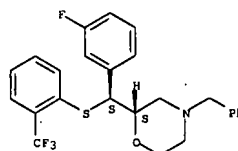
RN 668471-00-9 CAPLUS
 CN Benzoic acid, 2-[(R)-phenyl[(2R)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



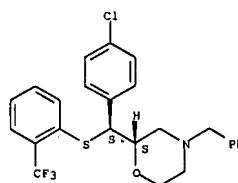
RN 668471-02-1 CAPLUS
 CN Morpholine, 2-[(R)-[2-(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-04-3 CAPLUS
 CN Morpholine, 2-[(R)-[2-(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

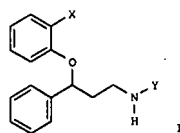


RN 668471-08-7 CAPLUS

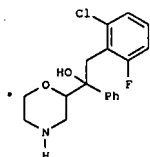
L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:216719 CAPLUS
 DOCUMENT NUMBER: 142:291416
 TITLE: Treatment of stuttering and other communication disorders with norepinephrine reuptake inhibitors
 INVENTOR(S): Kelsay, Douglas Kenneth
 PATENT ASSIGNEE(S): Eli Lilly and Company, USA
 SOURCE: PCT Int. Appl., 299 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005021095	A2	20050310	WO 2004-US25591	20040825
WO 2005021095	A3	20050609		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OH, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MM, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2532349	A1	20050310	CA 2004-2532349	20040825
EP 1660185	A2	20060531	EP 2004-780429	20040825
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US 2007032554	A1	20070208	US 2006-568269	20060214
PRIORITY APPLN. INFO.:			US 2003-498018P	P 20030827
			WO 2004-US25591	W 20040825

OTHER SOURCE(S): MARPAT 142:291416
 GI



I



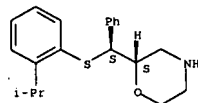
II

AB Provided are methods and medicaments for treating stuttering or another communication disorder, comprising administering to a patient in need of such treatment an effective amount of a selective norepinephrine reuptake inhibitor. The invention discloses the use of atomoxetine, racemic reboxetine, (S,S)-reboxetine, and compds. of formula I [wherein X = alkylthio and Y = alkyl; as described in U.S. patent Number 5,281,624],

as well as their pharmaceutically acceptable salts, as the norepinephrine reuptake inhibitors described for treatment purposes. The invention further discloses the preparation of addnl. heterocyclic deriva. (as well as their pharmaceutically acceptable salts) that possess ability to serve as norepinephrine reuptake inhibitors. For instance, morpholine derivative II-HCl was prepared via alkylation of (4-benzyl-morpholin-2-yl)(phenyl)methanone with 2-chloro-6-fluorobenzylmagnesium chloride and subsequent N-debenzylation. The preferred invention compds. exhibited Ki values of less than 500 nM at the norepinephrine transporter (scintillation proximity assay).

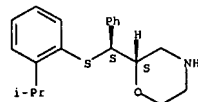
IT 668470-56-2P 668470-57-3P 668470-58-4P
668470-59-5P 668470-60-8P 668470-61-9P
668470-62-0P 668470-63-1P 668470-64-2P
668470-65-3P 668470-66-4P 668470-67-5P
668470-68-6P 668470-69-7P 668470-70-0P
668470-71-1P 668470-72-2P 668470-73-3P
668470-74-4P 668470-75-5P 668470-76-6P
668470-77-7P 668470-78-8P 668470-79-9P
668470-80-2P 668470-81-3P 847687-23-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of heterocyclic compds. useful as norepinephrine reuptake inhibitors)

RN 668470-56-2 CAPLUS



RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

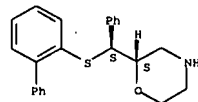
Absolute stereochemistry.



● HCl

RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[1,1'-biphenyl]-2-ylthio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

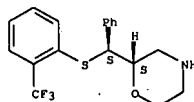
Absolute stereochemistry.



RN 668470-62-0 CAPLUS
CN Morpholine, 2-[(S)-[1,1'-biphenyl]-2-ylthio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

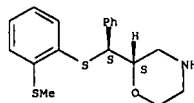
Absolute stereochemistry.

Absolute stereochemistry.



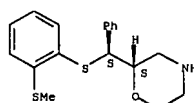
RN 668470-57-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-58-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

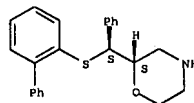
Absolute stereochemistry.



● HCl

RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

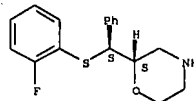
Absolute stereochemistry.



● HCl

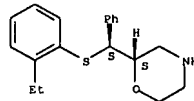
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



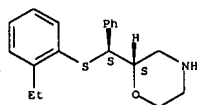
RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-65-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-ethylphenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

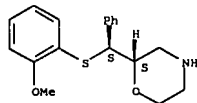
Absolute stereochemistry.



● HCl

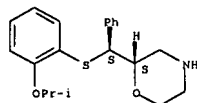
RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



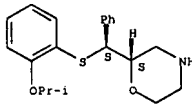
RN 668470-67-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-68-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

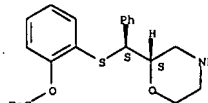
Absolute stereochemistry.



● HCl

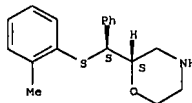
RN 668470-69-7 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



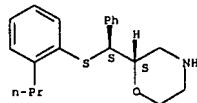
RN 668470-70-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-methylphenyl)thio]phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



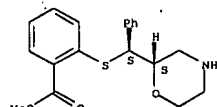
RN 668470-71-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-propylphenyl)thio]phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



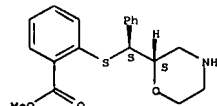
RN 668470-72-2 CAPLUS
CN Benzoic acid, 2-[(S)-[2-(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-73-3 CAPLUS
CN Benzoic acid, 2-[(S)-[2-(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester, hydrochloride (9CI) (CA INDEX NAME)

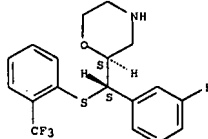
Absolute stereochemistry.



● HCl

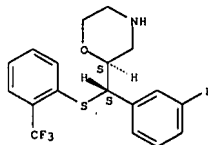
RN 668470-74-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-75-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(3-fluorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

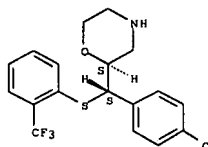
Absolute stereochemistry.



● HCl

RN 668470-76-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

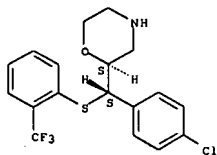
Absolute stereochemistry.



RN 668470-77-7 CAPLUS
CN Morpholine, 2-[(S)-[2-(4-chlorophenyl)[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
), hydrochloride, (2S)- (9CI) (CA INDEX NAME)

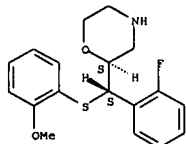
Absolute stereochemistry.



● HCl

RN 668470-78-8 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



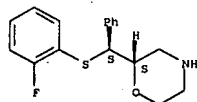
RN 668470-79-9 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847607-23-4 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)thio]phenylmethyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

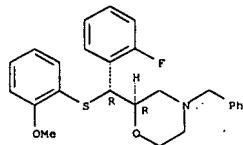


● HCl

IT 667876-61-1P 667876-73-5P 667876-84-8P
 667876-86-0P 668470-88-0P 668470-89-1P
 668470-90-4P 668470-91-5P 668470-92-6P
 668470-95-9P 668470-97-1P 668471-00-5P
 668471-02-1P 668471-04-3P 668471-08-7P
 847607-22-3P 847607-24-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of heterocyclic compds. useful as norepinephrine reuptake inhibitors)

RN 667876-61-1 CAPLUS
 CN Morpholine, 2-[(R)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

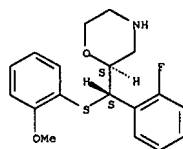
Relative stereochemistry.



RN 667876-73-5 CAPLUS
 CN Morpholine, 2-[(R)-(2-methylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

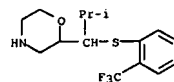
Relative stereochemistry.

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

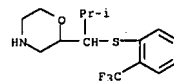
RN 668470-80-2 CAPLUS
 CN Morpholine, 2-[(2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl)-(2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)



RN 668470-81-3 CAPLUS
 CN Morpholine, 2-[(2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl)-(2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

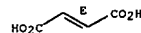
CRN 668470-80-2
 CMF C15 H20 F3 N O S



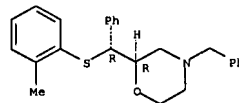
CM 2

CRN 110-17-8
 CMF C4 H4 O4

Double bond geometry as shown.

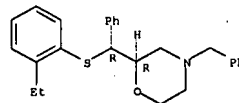


L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



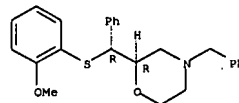
RN 667876-84-8 CAPLUS
 CN Morpholine, 2-[(R)-(2-ethylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



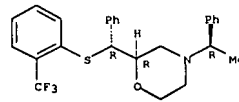
RN 667876-86-0 CAPLUS
 CN Morpholine, 2-[(R)-(2-methoxyphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



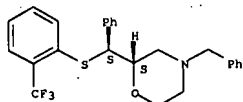
RN 668470-88-0 CAPLUS
 CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl][2-(trifluoromethyl)phenyl]thio]methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



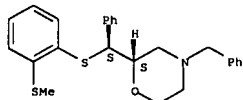
RN 668470-89-1 CAPLUS
 CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl][2-(trifluoromethyl)phenyl]thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.



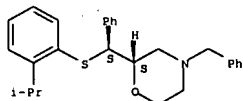
RN 668470-90-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



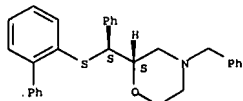
RN 668470-91-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



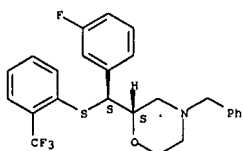
RN 668470-92-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



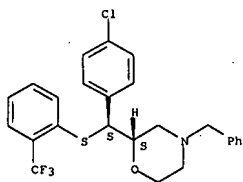
RN 668470-95-9 CAPLUS
CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

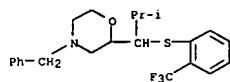


RN 668471-04-3 CAPLUS
CN Morpholine, 2-[(R)-[4-chlorophenyl][2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



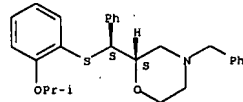
RN 668471-08-7 CAPLUS
CN Morpholine, 2-[2-methyl-1-[2-(trifluoromethyl)phenyl]thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 847687-22-3 CAPLUS
CN Morpholine, 2-[(R)-[2-(fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

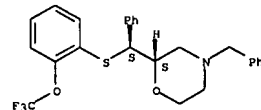
Relative stereochemistry.

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Relative stereochemistry.



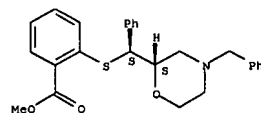
RN 668470-97-1 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-00-9 CAPLUS
CN Benzoic acid, 2-[(R)-phenyl[(2R)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

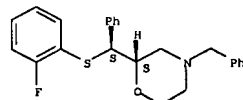
Relative stereochemistry.



RN 668471-02-1 CAPLUS
CN Morpholine, 2-[(R)-[3-fluorophenyl][2-(trifluoromethyl)phenyl]thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

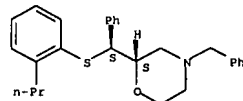
Relative stereochemistry.

L15 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 847687-24-5 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(propylphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

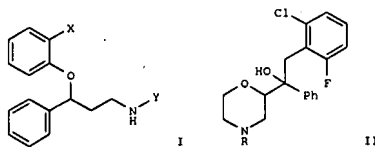
Relative stereochemistry.



L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:216660 CAPLUS
DOCUMENT NUMBER: 142:291415
TITLE: Treatment of pervasive development disorders
employing
INVENTOR(S): norepinephrine reuptake inhibitors
Allen, Albert John; Kelsey, Douglas Kenneth
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 300 pp.
CODEN: FIXXDZ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005020976	A2	20050310	WO 2004-US25593	20040825
WO 2005020976	A3	20050616		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MM, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2536161	A1	20050310	CA 2004-2536161	20040825
EP 1660065	A2	20060531	EP 2004-780431	20040825
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
US 2006241188	A1	20061026	US 2006-568466	20060214
PRIORITY APPLN. INFO.:			US 2003-498146P	P 20030827
			WO 2004-US25593	W 20040825

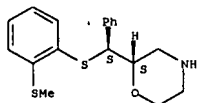
OTHER SOURCE(S): MARPAT 142:291415
GI



AB Provided are methods and medicaments for treating a pervasive development disorder, comprising administering to a patient in need of such treatment an effective amount of a selective norepinephrine reuptake inhibitor.
The

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

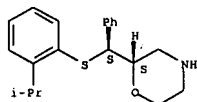
Absolute stereochemistry.



● HCl

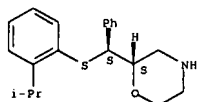
RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

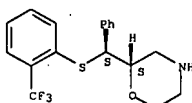
RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
invention discloses the use of atomoxetine, racemic reboxetine, (S,S)-reboxetine, and compds. of formula I [wherein X = alkylthio and Y = alkyl; as described in U.S. patent No. 5,281,624], as well as their pharmaceutically acceptable salts, as the norepinephrine reuptake inhibitors described for treatment purposes. The invention further discloses the prepn. of addnl. heterocyclic derivs. (as well as their pharmaceutically acceptable salts) that possess ability to serve as norepinephrine reuptake inhibitors. For instance, morpholine deriv. 11-HCl (R = H) was prepd. via alkylation of (4-benzyl-morpholin-2-yl)(phenyl)methanone by 2-chloro-6-fluorobenzylmagnesium chloride and subsequent N-debenzylation of the obtained alc. I (R = Bn). The preferred

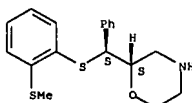
invention compds. exhibited Ki values of less than 500 nM at the norepinephrine transporter (scintillation proximity assay).
IT 668470-56-2P 668470-57-3P 668470-58-4P
668470-59-5P 668470-60-8P 668470-61-9P
668470-62-0P 668470-63-1P 668470-64-2P
668470-65-3P 668470-66-4P 668470-67-5P
668470-68-6P 668470-69-7P 668470-70-0P
668470-71-1P 668470-72-2P 668470-73-3P
668470-74-4P 668470-75-5P 668470-76-6P
668470-77-7P 668470-78-8P 668470-79-9P
668470-80-2P 668470-81-3P 847687-23-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of heterocyclic compds. useful as norepinephrine reuptake inhibitors)
RN 668470-56-2 CAPLUS
CN Morpholine, 2-[(S)-phenyl[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



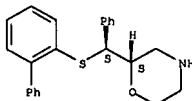
RN 668470-57-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



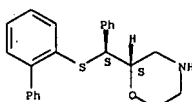
RN 668470-58-4 CAPLUS

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 668470-62-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

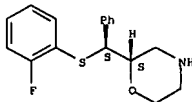
Absolute stereochemistry.



● HCl

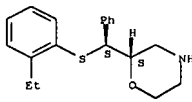
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

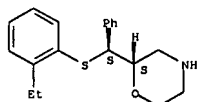
Absolute stereochemistry.



RN 668470-65-3 CAPLUS

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 CN Morpholine, 2-[(S)-[(2-ethylphenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

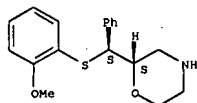
Absolute stereochemistry.



● HCl

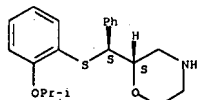
RN 668470-66-4 CAPLUS
 CN Morpholine, 2-[(S)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-67-5 CAPLUS
 CN Morpholine, 2-[(S)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

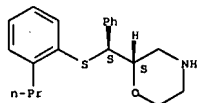
Absolute stereochemistry.



RN 668470-68-6 CAPLUS
 CN Morpholine, 2-[(S)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

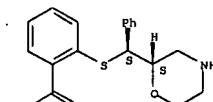
Absolute stereochemistry.

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



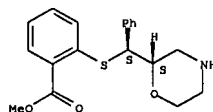
RN 668470-72-2 CAPLUS
 CN Benzoic acid, 2-[(S)-[(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-73-3 CAPLUS
 CN Benzoic acid, 2-[(S)-[(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

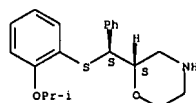


● HCl

RN 668470-74-4 CAPLUS
 CN Morpholine, 2-[(S)-[(3-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

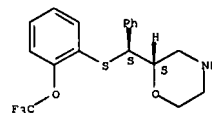
L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

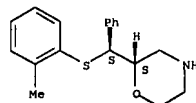
RN 668470-69-7 CAPLUS
 CN Morpholine, 2-[(S)-phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-70-0 CAPLUS
 CN Morpholine, 2-[(S)-[(2-methylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

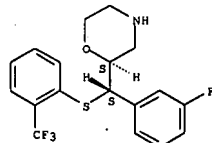
Absolute stereochemistry.



RN 668470-71-1 CAPLUS
 CN Morpholine, 2-[(S)-phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

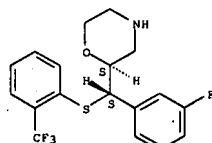
Absolute stereochemistry.

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 668470-75-5 CAPLUS
 CN Morpholine, 2-[(S)-[(3-fluorophenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

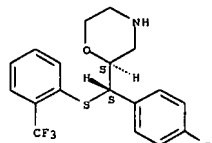
Absolute stereochemistry.



● HCl

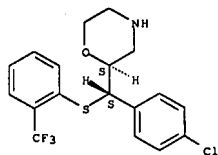
RN 668470-76-6 CAPLUS
 CN Morpholine, 2-[(S)-[(4-chlorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-77-7 CAPLUS
 CN Morpholine, 2-[(S)-[(4-chlorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

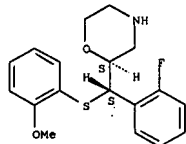
Absolute stereochemistry.



● HCl

RN 668470-78-8 CAPLUS
 CN Morphinolone, 2-[(S)-(2-fluorophenyl)]-[(2-methoxyphenyl)thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

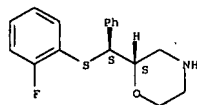


RN 668470-79-9 CAPLUS
 CN Morphinolone, 2-[(S)-(2-fluorophenyl)]-[(2-methoxyphenyl)thio]methyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 847687-23-4 CAPLUS
 CN Morphinolone, 2-[(S)-(2-fluorophenyl)thio]phenylmethyl-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

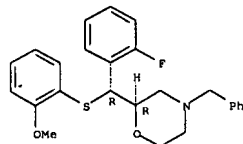


● HCl

IT 667876-61-1P 667876-73-5P 667876-84-8P
 667876-86-0P 668470-88-0P 668470-89-1P
 668470-90-4P 668470-91-5P 668470-92-6P
 668470-95-9P 668470-97-1P 668471-00-9P
 668471-02-1P 668471-04-3P 668471-08-7P
 847687-22-3P 847687-24-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of heterocyclic compds. useful as norepinephrine reuptake inhibitors)

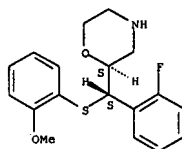
RN 667876-61-1 CAPLUS
 CN Morphinolone, 2-[(R)-(2-fluorophenyl)]-[(2-methoxyphenyl)thio]methyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



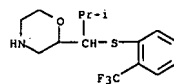
RN 667876-73-5 CAPLUS
 CN Morphinolone, 2-[(R)-(2-methylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

RN 668470-80-2 CAPLUS
 CN Morphinolone, 2-[(2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl)- (9CI) (CA INDEX NAME)

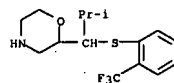


RN 668470-81-3 CAPLUS
 CN Morphinolone, 2-[(2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 668470-80-2

CMF C15 H20 F3 N O S

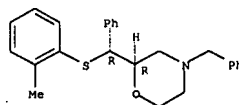
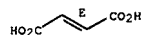


CM 2

CRN 110-17-8

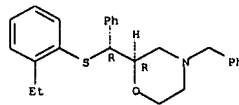
CMF C4 H4 O4

Double bond geometry as shown.



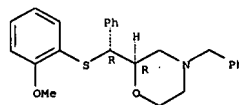
RN 667876-84-8 CAPLUS
 CN Morphinolone, 2-[(R)-(2-ethylphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



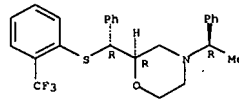
RN 667876-86-0 CAPLUS
 CN Morphinolone, 2-[(R)-(2-methoxyphenyl)thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



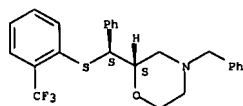
RN 668470-88-0 CAPLUS
 CN Morphinolone, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl]-(2-(trifluoromethyl)phenyl)thio]methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



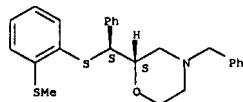
RN 668470-89-1 CAPLUS
 CN Morphinolone, 4-(phenylmethyl)-2-[(S)-phenyl]-(2-(trifluoromethyl)phenyl)thio]methyl-, (2S)- (9CI) (CA INDEX NAME)

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.



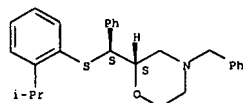
RN 668470-90-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



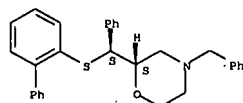
RN 668470-91-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



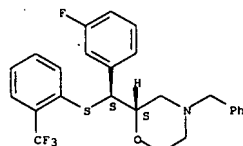
RN 668470-92-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



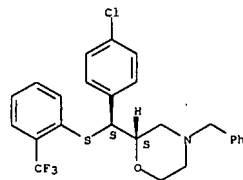
RN 668470-95-9 CAPLUS
CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

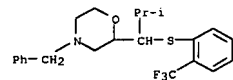


RN 668471-04-3 CAPLUS
CN Morpholine, 2-[(R)-[4-chlorophenyl][2-(trifluoromethyl)phenyl]thio]methyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



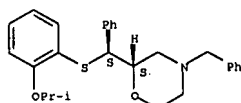
RN 668471-08-7 CAPLUS
CN Morpholine, 2-[2-methyl-1-[2-(trifluoromethyl)phenyl]thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 847687-22-3 CAPLUS
CN Morpholine, 2-[(R)-[2-(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

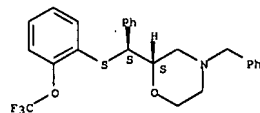
Relative stereochemistry.

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Relative stereochemistry.



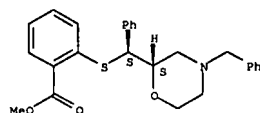
RN 668470-97-1 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(trifluoromethoxy)phenyl]thio]methyl-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-00-9 CAPLUS
CN Benzoic acid, 2-[(R)-phenyl[2-(2-phenylmethyl)-2-morpholinyl]methyl]thio-, methyl ester, rel- (9CI) (CA INDEX NAME)

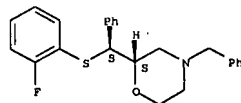
Relative stereochemistry.



RN 668471-02-1 CAPLUS
CN Morpholine, 2-[(R)-[3-fluorophenyl][2-(trifluoromethyl)phenyl]thio]methyl-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

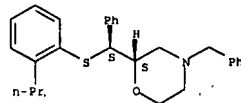
Relative stereochemistry.

L15 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 847687-24-5 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[2-(propylphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



ACCESSION NUMBER: 2005:216659 CAPLUS

DOCUMENT NUMBER: 142:291414

TITLE: Treatment of learning disabilities and motor skills disorder with norepinephrine reuptake inhibitors

INVENTOR(S): Summer, Calvin Russell

PATENT ASSIGNEE(S): Eli Lilly and Company, USA

SOURCE: PCT Int. Appl., 304 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

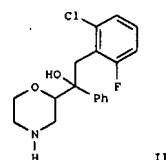
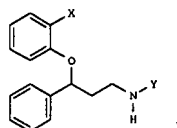
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005020975	A2	20050310	WO 2004-US25592	20040825
WO 2005020975	A3	20050602		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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CA 2530014	A1	20050310	CA 2004-2530014	20040825
EP 1660064	A2	20060531	EP 2004-780430	20040825
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US 2007105960	A1	20070510	US 2006-568244	20060214
PRIORITY APPLN. INFO.:			US 2003-498019P	P 20030827
			WO 2004-US25592	W 20040825

OTHER SOURCE(S): MARPAT 142:291414

GI



AB Provided are methods and medicaments for treating a learning disability or a motor skills disorder, comprising administering to a patient in need of such treatment an effective amount of a selective norepinephrine reuptake inhibitor. The invention discloses the use of atomoxetine, racemic reboxetine, (S,S)-reboxetine, and compds. of formula I [wherein X = alkylthio and Y = alkyl; as described in U.S. patent Number 5,281,624], as well as their pharmaceutically acceptable salts, as the norepinephrine reuptake inhibitors described for treatment purposes. The invention further discloses the preparation of addnl. heterocyclic derivs. (as well as their pharmaceutically acceptable salts) that possess ability to serve as norepinephrine reuptake inhibitors. For instance, morpholine derivative II*HCl was prepared via alkylation of (4-benzyl-morpholin-2-yl) (phenyl)methanone with 2-chloro-6-fluorobenzylmagnesium chloride and subsequent N-debenzylation. The preferred invention compds. exhibited Ki values of less than 500 nM at the norepinephrine transporter (scintillation proximity assay).

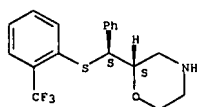
IT 668470-56-2P 668470-57-3P 668470-58-4P
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668470-80-2P 668470-81-3P 668470-82-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heterocyclic compds. useful as norepinephrine reuptake inhibitors)

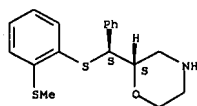
RN 668470-56-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(trifluoromethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



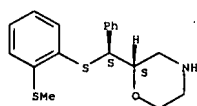
RN 668470-57-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-58-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

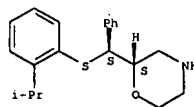
Absolute stereochemistry.



● HCl

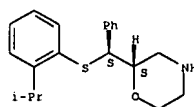
RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

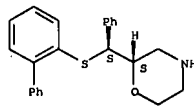
Absolute stereochemistry.



● HCl

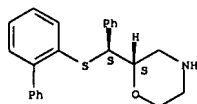
RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-62-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(1,1'-biphenyl)-2-ylthio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

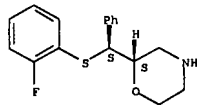
Absolute stereochemistry.



● HCl

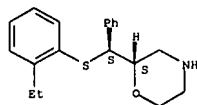
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



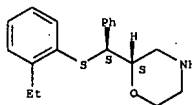
RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-65-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxyphenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

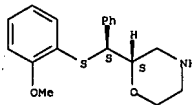
Absolute stereochemistry.



● HCl

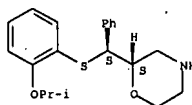
RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



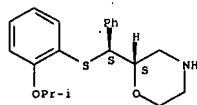
RN 668470-67-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-68-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxyphenyl)thio]phenylmethyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

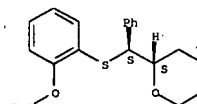
Absolute stereochemistry.



● HCl

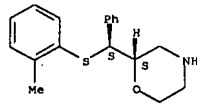
RN 668470-69-7 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(2-(1-methylethoxyphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



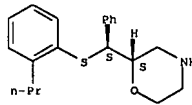
RN 668470-70-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-methylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



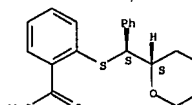
RN 668470-71-1 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(2-propylphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



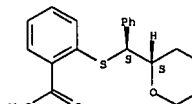
RN 668470-72-2 CAPLUS
CN Benzoic acid, 2-[(S)-[2-(2-morpholinylphenyl)methyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-73-3 CAPLUS
CN Benzoic acid, 2-[(S)-[2-(2-morpholinylphenyl)methyl]thio]-, methyl ester, hydrochloride (9CI) (CA INDEX NAME)

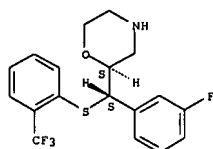
Absolute stereochemistry.



● HCl

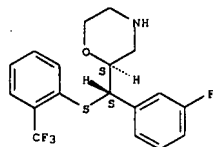
RN 668470-74-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(2-(1-methylethoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-75-5 CAPLUS
CN Morpholine,
2-[(S)-(3-fluorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-,
hydrochloride, (2S)-(9CI) (CA INDEX NAME)

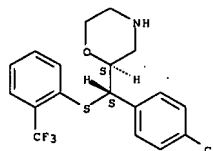
Absolute stereochemistry.



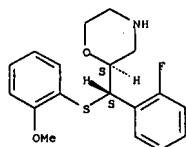
● HCl

RN 668470-76-6 CAPLUS
CN Morpholine,
2-[(S)-(4-chlorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-,
(2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

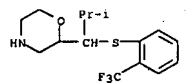


RN 668470-77-7 CAPLUS
CN Morpholine,
2-[(S)-(4-chlorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-,
(2S)-(9CI) (CA INDEX NAME)



● HCl

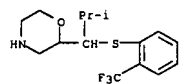
RN 668470-80-2 CAPLUS
CN Morpholine, 2-[(2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]-, (9CI)
(CA INDEX NAME)



RN 668470-81-3 CAPLUS
CN Morpholine, 2-[(2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

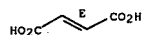
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CMF C15 H20 F3 N O S



CM 2

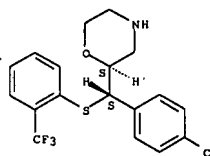
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



[-, hydrochloride, (2S)-(9CI) (CA INDEX NAME)

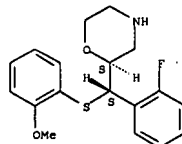
Absolute stereochemistry.



● HCl

RN 668470-78-8 CAPLUS
CN Morpholine, 2-[(S)-(2-fluorophenyl)][2-(methoxyphenyl)thio]methyl]-, (2S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

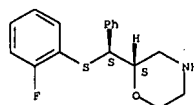


RN 668470-79-9 CAPLUS
CN Morpholine, 2-[(S)-(2-fluorophenyl)][2-(methoxyphenyl)thio]methyl]-, hydrochloride, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 847687-23-4 CAPLUS
CN Morpholine, 2-[(S)-(2-fluorophenyl)thio]phenylmethyl]-, hydrochloride, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

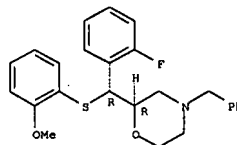


● HCl

IT 667876-61-1P 667876-73-5P 667876-84-8P
667876-86-0P 668470-88-0P 668470-89-1P
668470-90-4P 668470-91-5P 668470-92-6P
668470-95-9P 668470-97-1P 668471-00-9P
668471-02-1P 668471-04-3P 668471-08-7P
847687-22-3P 847687-24-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of heterocyclic compds. useful as norepinephrine reuptake
inhibitors)

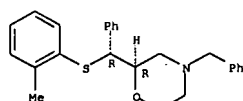
RN 667876-61-1 CAPLUS
CN Morpholine, 2-[(R)-(2-fluorophenyl)][2-(methoxyphenyl)thio]methyl]-4-
(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



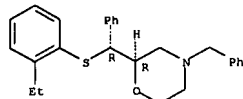
RN 667876-73-5 CAPLUS
CN Morpholine, 2-[(R)-(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



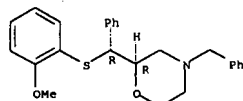
RN 667876-84-8 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



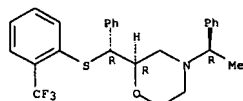
RN 667876-86-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



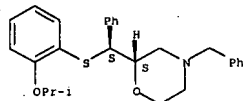
RN 668470-88-0 CAPLUS
CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl[(2-trifluoromethyl)phenyl]thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



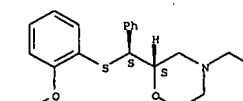
RN 668470-89-1 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl[(2-trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



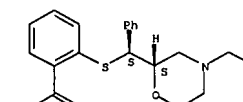
RN 668470-97-1 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[(2-trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668471-00-9 CAPLUS
CN Benzoic acid, 2-[(R)-phenyl[(2-morpholinyl)methyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

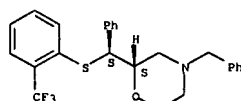
Relative stereochemistry.



RN 668471-02-1 CAPLUS
CN Morpholine, 2-[(R)-[(3-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

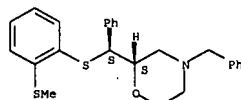
Relative stereochemistry.

Absolute stereochemistry.



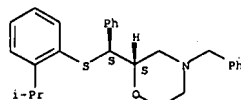
RN 668470-90-4 CAPLUS
CN Morpholine, 2-[(S)-[(2-methylthio)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



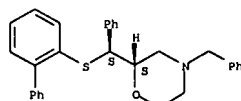
RN 668470-91-5 CAPLUS
CN Morpholine, 2-[(S)-[(2-(1-methylethyl)phenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

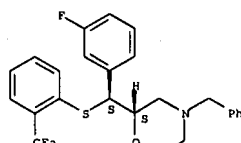


RN 668470-92-6 CAPLUS
CN Morpholine, 2-[(S)-[(1,1'-biphenyl)-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

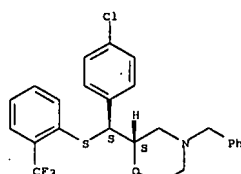


RN 668470-95-9 CAPLUS
CN Morpholine, 2-[(R)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

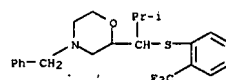


RN 668471-04-3 CAPLUS
CN Morpholine, 2-[(R)-[(4-chlorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

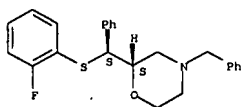


RN 668471-08-7 CAPLUS
CN Morpholine, 2-[(R)-[(2-(trifluoromethyl)phenyl)thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



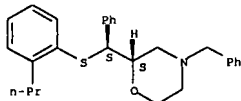
RN 847687-22-3 CAPLUS
CN Morpholine, 2-[(R)-[(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 847687-24-5 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[(2-propylphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



ACCESSION NUMBER: 2005:74686 CAPLUS
DOCUMENT NUMBER: 142:298058
TITLE: Discovery and structure-activity relationships of novel selective norepinephrine and dual serotonin/norepinephrine reuptake inhibitors
AUTHOR(S): Boot, John; Cases, Manuel; Clark, Barry P.; Findlay, Jeremy; Gallagher, Peter T.; Hayhurst, Lorna; Man, Teresa; Montalbetti, Christian; Rathmell, Richard E.; Rudyk, Helene; Walter, Magnus W.; Whetton, Maria; Wood, Virginia
CORPORATE SOURCE: Lilly Research Centre, Eli Lilly & Co. Ltd, Burrey, GU20 6PH, UK
SOURCE: Bioorganic & Medicinal Chemistry Letters (2005), 15(3), 699-703
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:298058
AB Novel arylthiomethyl morpholines are potent selective norepinephrine reuptake inhibitors (NERIs) and dual serotonin/norepinephrine reuptake inhibitors (SRI/NERIs). The target compds. were prepared using a stereochem. versatile synthesis featuring an aldol condensation as the

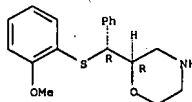
key step. One enantiomer of the 2-methoxy-substituted analog was found to be a potent and selective norepinephrine reuptake inhibitor, whereas the opposite enantiomer was a potent dual serotonin/norepinephrine reuptake inhibitor.

IT 667876-44-0P 668470-66-4P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (stereoselective preparation of (arylthiomethyl)morpholines as

selective norepinephrine reuptake inhibitors and dual serotonin/norepinephrine reuptake inhibitors)

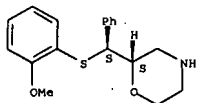
RN 667876-44-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



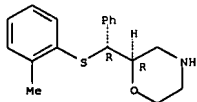
RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



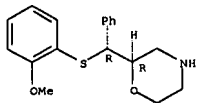
IT 667876-74-6P 667876-87-1P 847740-82-3P
847740-83-4P 847740-84-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (stereoselective preparation of (arylthiomethyl)morpholines as selective norepinephrine reuptake inhibitors and dual serotonin/norepinephrine reuptake inhibitors)
RN 667876-74-6 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



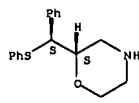
RN 667876-87-1 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



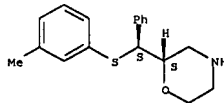
RN 847740-82-3 CAPLUS
CN Morpholine, 2-[(R)-phenyl(phenylthio)methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



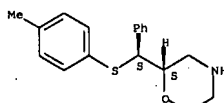
RN 847740-83-4 CAPLUS
CN Morpholine, 2-[(R)-[(3-methylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 847740-84-5 CAPLUS
CN Morpholine, 2-[(R)-[(4-methylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

ACCESSION NUMBER: 2004:1036891 CAPLUS
 DOCUMENT NUMBER: 142:16841
 TITLE: Treatment of emotional dysregulation
 INVENTOR(S): Allen, Albert John; Cloutier, Kathleen Ann; Michelson, David; Reimherr, Frederick William
 PATENT ASSIGNEE(S): Eli Lilly and Company, USA
 SOURCE: FCT Int. Appl., 155 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004/033356	A2	20041202	WO 2004-US13005	20040511
WO 2004/033356	A3	20050331		

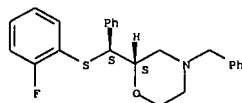
W: RE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LJ, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-470752P P 20030515

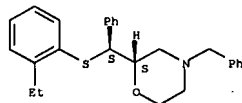
OTHER SOURCE(S): MARPAT 142:16841
 AB Provided is a method of treating emotional dysregulation comprising administering to a patient in need of such treatment a selective norepinephrine reuptake inhibitor.
 IT 668470-57-3P 668470-59-5P 668470-61-9P 668470-89-1P 668470-93-7P 668470-94-8P 668470-99-3P 800407-96-9P 800407-97-0P 800407-98-1P 800407-99-2P 800408-00-8P 800408-01-9P 800408-02-0P 800408-03-1P 800408-04-2P 800408-05-3P 800408-06-4P 800408-07-5P 800408-08-6P 800408-09-7P 800408-10-0P 800408-11-1P 800408-12-2P 800408-13-3P
 RL: RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation): RACT (Reactant or reagent) (treatment of emotional dysregulation)
 RN 668470-57-3 CAPLUS
 CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



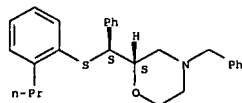
RN 668470-94-8 CAPLUS
 CN Morpholine, 2-[(S)-[2-(2-ethylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



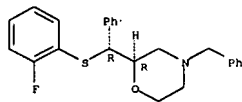
RN 668470-99-3 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl[(2-propylphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



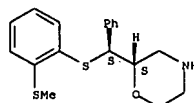
RN 800407-96-9 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



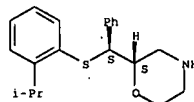
RN 800407-97-0 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-ethylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



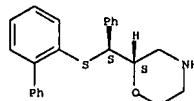
RN 668470-59-5 CAPLUS
 CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



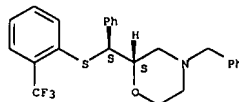
RN 668470-61-9 CAPLUS
 CN Morpholine, 2-[(S)-[1,1'-biphenyl]-2-ylthio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



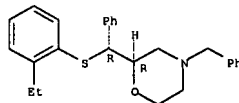
RN 668470-89-1 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl[(2-trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



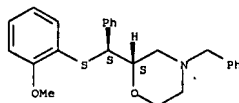
RN 668470-93-7 CAPLUS
 CN Morpholine, 2-[(S)-[2-(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



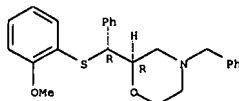
RN 800407-98-1 CAPLUS
 CN Morpholine, 2-[(S)-[2-(2-methoxyphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



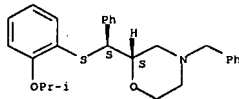
RN 800407-99-2 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-methoxyphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



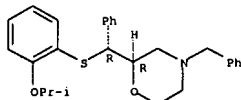
RN 800408-00-8 CAPLUS
 CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



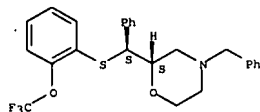
RN 800408-01-9 CAPLUS
 CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



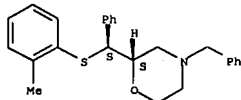
RN 800408-02-0 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl[(2-(trifluoromethoxy)phenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



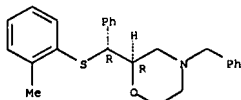
RN 800408-03-1 CAPLUS
CN Morpholine, 2-[(S)-[(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

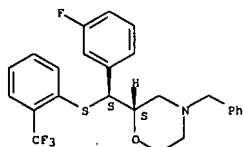


RN 800408-04-2 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

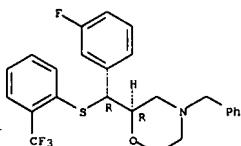


RN 800408-05-3 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[(2-propylphenyl)thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)



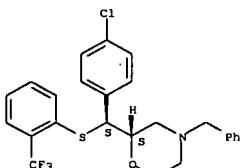
RN 800408-09-7 CAPLUS
CN Morpholine, 2-[(R)-[(3-fluorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



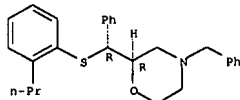
RN 800408-10-0 CAPLUS
CN Morpholine, 2-[(S)-[(4-chlorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



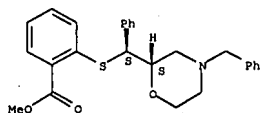
RN 800408-11-1 CAPLUS
CN Morpholine, 2-[(R)-[(4-chlorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



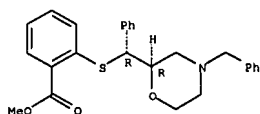
RN 800408-06-4 CAPLUS
CN Benzoic acid, 2-[(S)-phenyl[(2S)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 800408-07-5 CAPLUS
CN Benzoic acid, 2-[(R)-phenyl[(2R)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

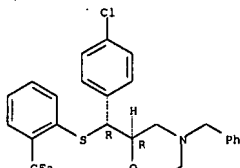


RN 800408-08-6 CAPLUS
CN Morpholine, 2-[(S)-[(3-fluorophenyl)[(2-(trifluoromethyl)phenyl)thio]methyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

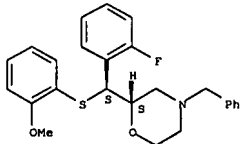


Absolute stereochemistry.



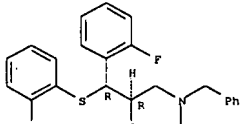
RN 800408-12-2 CAPLUS
CN Morpholine, 2-[(S)-[(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 800408-13-3 CAPLUS
CN Morpholine, 2-[(R)-[(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

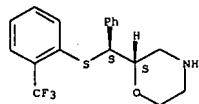


IT 668470-56-2P 668470-63-1P 668470-64-2P
668470-66-4P 668470-67-5P 668470-69-7P
668470-70-0P 668470-71-1P 668470-72-2P
668470-74-4P 668470-76-6P 668470-78-8P
668470-88-0P
RL: SPN (Synthetic preparation); PREP (Preparation)

L15 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

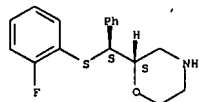
RN 668470-56-2 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



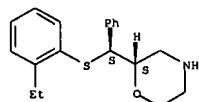
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[(2-ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

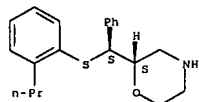


RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

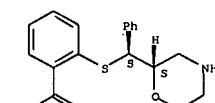
L15 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



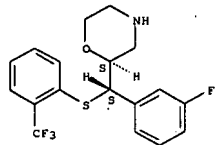
RN 668470-72-2 CAPLUS
CN Benzoic acid, 2-[(S)-[(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-74-4 CAPLUS
CN Morpholine, 2-[(S)-[(3-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

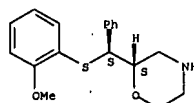
Absolute stereochemistry.



RN 668470-76-6 CAPLUS
CN Morpholine, 2-[(S)-[(4-chlorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

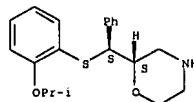
Absolute stereochemistry.

L15 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



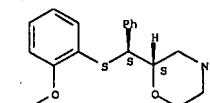
RN 668470-67-5 CAPLUS
CN Morpholine, 2-[(S)-[(2-(1-methylethoxy)phenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



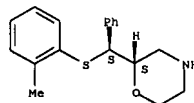
RN 668470-69-7 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



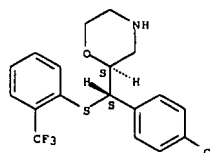
RN 668470-70-0 CAPLUS
CN Morpholine, 2-[(S)-[(2-methylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



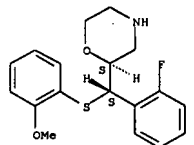
RN 668470-71-1 CAPLUS
CN Morpholine, 2-[(S)-phenyl[[2-(propyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

L15 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



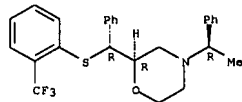
RN 668470-78-8 CAPLUS
CN Morpholine, 2-[(S)-[(2-fluorophenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

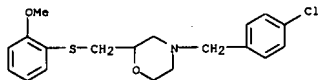


RN 668470-88-0 CAPLUS
CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl[[2-(trifluoromethyl)phenyl]thio]methyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



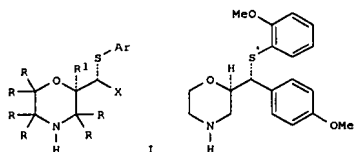
L15 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:363760 CAPLUS
 DOCUMENT NUMBER: 141:106442
 TITLE: New Series of Morpholine and 1,4-Oxazepane
 Derivatives
 3D-QSAR
 as Dopamine D4 Receptor Ligands: Synthesis and
 Model
 AUTHOR(S): Audouze, Karine; Nielsen, Elsebet Oestergaard;
 Peters, Dan
 CORPORATE SOURCE: NeuroSearch A/S, Ballerup, DK-2750, Den.
 SOURCE: Journal of Medicinal Chemistry (2004), 47(12),
 3089-3104
 CODEN: JMCMAR; ISSN: 0022-2623
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 141:106442
 AB Since the identification of the dopamine D4 receptor subtype and
 speculations about its possible involvement in schizophrenia, much work
 has been put into development of selective D4 ligands. These selective
 ligands may be effective antipsychotics without extrapyramidal side
 effects. The synthesis of a new series of 2,4-disubstituted morpholines
 and 2,4-disubstituted 1,4-oxazepanes with selectivity for the dopamine D4
 receptor is described. A 3D-QSAR anal. using the GRID/GOLPE methodol.
 was
 performed with the purpose to get a better understanding of the
 relationship between chemical structure and biol. activity. Inspection
 of
 the coefficient plots shows that regions which are important for
 affinity are
 situated around the two benzene ring systems, a p-chlorobenzyl group, and
 the aliphatic amine belonging to the morpholine or 1,4-oxazepane system.
 In
 addition, the size of the morpholine or 1,4-oxazepane ring seems to be
 important for affinity.
 IT 203862-20-8P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL
 (Biological study); PREP (Preparation)
 (preparation of morpholine and 1,4-oxazepane derivs. as dopamine D4
 receptor
 ligands)
 RN 203862-20-8 CAPLUS
 CN Morpholine,
 4-[(4-chlorophenyl)methyl]-2-[(2-methoxyphenyl)thio]methyl]-,
 ethanediolate (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 203862-19-5
 CMF C19 H22 Cl N O2 S



L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:182854 CAPLUS
 DOCUMENT NUMBER: 140:235726
 TITLE: Preparation of benzyl morpholine derivatives capable
 of inhibiting serotonin and norepinephrine reuptake
 Clark, Barry Peter; Gallagher, Peter Thaddeus;
 Haughton, Helen Louise
 PATENT ASSIGNEE(S): Eli Lilly and Company, USA
 SOURCE: PCT Int. Appl., 88 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018440	A1	20040304	WO 2003-US323268	20030818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003261245	A1	20040311	AU 2003-261245	20030818
EP 1546123	A1	20050629	EP 2003-792992	20030818
EP 1546123	B1	20060531		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
AT 327982	T	20060615	AT 2003-792992	20030818
ES 2264028	T3	20061216	ES 2003-3792992	20030818
US 2006052377	A1	20060309	US 2005-524798	20050217
			GB 2002-19685	A 20020823
PRIORITY APPLN. INFO.:			US 2002-415327P	P 20021001
			WO 2003-US23268	W 20030818

 OTHER SOURCE(S): CASREACT 140:235726; MARPAT 140:235726
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L15 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

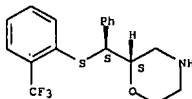
CM 2
 CRN 144-62-7
 CMF C2 H2 O4



REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
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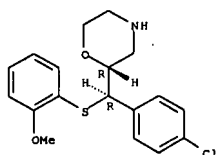
L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AB Title compds. I [Ar = (un)substituted Ph optionally substituted with 1-5 substituents selected from alkyl, alkoxy, alkylthio, halo, or (un)substituted phenyl; X = (un)substituted Ph optionally substituted with 1-5 substituents selected from alkyl, alkoxy, or halo; R1 = H or alkyl; R = independently H or alkyl; each mentioned alkyl may be optionally substituted with one or more halo atoms] and pharmaceutically acceptable salts thereof are prepared and disclosed as inhibitors of serotonin and norepinephrine reuptake. Thus, e.g., II was prepared by condensation of 4-benzyl-2-cyanomorpholine with 4-bromoanisole to provide intermediate [4-methoxyphenyl]4-benzylmorpholin-2-ylmethanone which underwent subsequent reduction, substitution with 2,2'-dimethoxydiphenylsulfide, debenzoylation and resolution via chiral chromatog. to provide II which was converted to its hydrochloride salt. I have been found to exhibit a Ki value less than 100nM at the serotonin transporter and a Ki value less than 100nM at the norepinephrine transporter as determined by scintillation proximity assays.
 IT 667876-41-7P
 RL: PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
 (crystal structure; preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)
 RN 667876-41-7 CAPLUS
 CN Morpholine, 2-[(S)-phenyl]2-[(trifluoromethyl)phenyl]thio]methyl]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)
 Absolute stereochemistry.



● HCI

IT 667876-96-2P
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (intermediate; preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)
 RN 667876-96-2 CAPLUS
 CN Morpholine, 2-[(R)-(4-chlorophenyl)]2-[(2-methoxyphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)
 Relative stereochemistry.

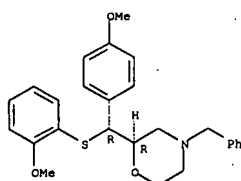


IT 667876-57-5P 667876-61-1P 667876-63-3P
 667876-64-4P 667876-68-8P 667876-71-3P
 667876-73-5P 667876-80-4P 667876-84-8P
 667876-86-0P 667876-88-2P 667876-94-0P
 667876-95-1P 667877-01-2P 667877-02-3P
 667877-06-7P 667877-07-8P 667877-10-3P
 667877-15-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate: preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)

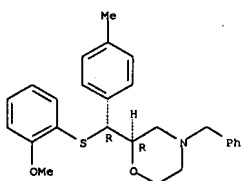
RN 667876-57-5 CAPLUS
 CN Morpholine, 2-[(R)-(4-methoxyphenyl){2-methoxyphenyl}thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



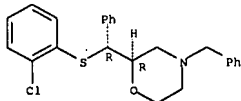
RN 667876-61-1 CAPLUS
 CN Morpholine, 2-[(R)-(2-fluorophenyl){2-methoxyphenyl}thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



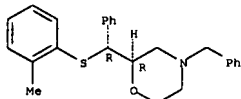
RN 667876-71-3 CAPLUS
 CN Morpholine, 2-[(R)-{(2-chlorophenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



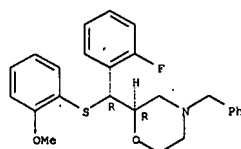
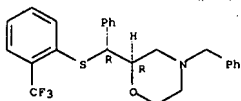
RN 667876-73-5 CAPLUS
 CN Morpholine, 2-[(R)-{(2-methylphenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



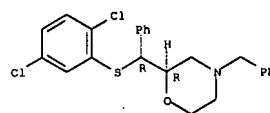
RN 667876-80-4 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl{2-(trifluoromethyl)phenyl}thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



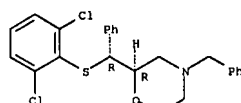
RN 667876-63-3 CAPLUS
 CN Morpholine, 2-[(R)-{(2,5-dichlorophenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 667876-64-4 CAPLUS
 CN Morpholine, 2-[(R)-{(2,6-dichlorophenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

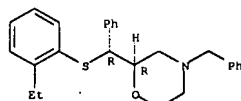


RN 667876-68-8 CAPLUS
 CN Morpholine, 2-[(R)-{(2-methoxyphenyl)thio}4-methylphenyl]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

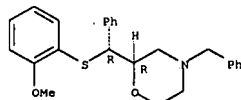
RN 667876-84-8 CAPLUS
 CN Morpholine, 2-[(R)-{(2-ethylphenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



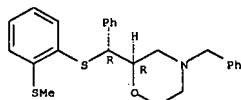
RN 667876-86-0 CAPLUS
 CN Morpholine, 2-[(R)-{(2-methoxyphenyl)thio}phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



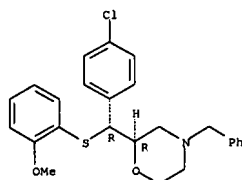
RN 667876-88-2 CAPLUS
 CN Morpholine, 2-[(R)-{(2-methylthio)phenyl}thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



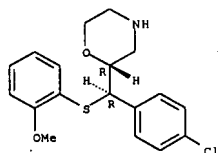
RN 667876-94-0 CAPLUS
 CN Morpholine, 2-[(R)-{(4-chlorophenyl){2-methoxyphenyl}thio}methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667876-95-1 CAPLUS
CN Morpholine, 2-[(R)-(4-chlorophenyl)][(2-methoxyphenyl)thio]methyl]-, hydrochloride, (2R)-rel- (9CI) (CA INDEX NAME)

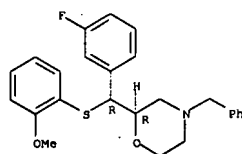
Relative stereochemistry.



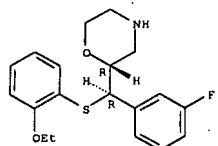
● HCl

RN 667877-01-2 CAPLUS
CN Morpholine, 2-[(R)-(3-fluorophenyl)][(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



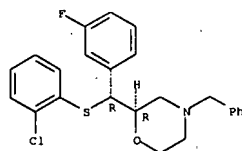
RN 667877-02-3 CAPLUS
CN Morpholine, 2-[(R)-(3-fluorophenyl)][(2-methoxyphenyl)thio]methyl]-, hydrochloride, (2R)-rel- (9CI) (CA INDEX NAME)



● HCl

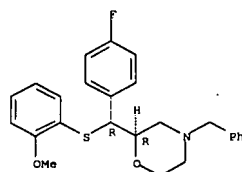
RN 667877-10-3 CAPLUS
CN Morpholine, 2-[(R)-(2-chlorophenyl)][(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



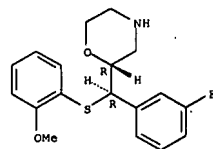
RN 667877-15-8 CAPLUS
CN Morpholine, 2-[(R)-(4-fluorophenyl)][(2-methoxyphenyl)thio]methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 667876-62-2P 667876-69-9P 667876-72-4P
667876-74-6P 667876-81-5P 667876-85-9P

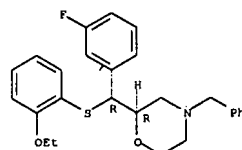
Relative stereochemistry.



● HCl

RN 667877-06-7 CAPLUS
CN Morpholine, 2-[(R)-(2-ethoxyphenyl)thio](3-fluorophenyl)methyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



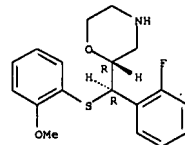
RN 667877-07-8 CAPLUS
CN Morpholine, 2-[(R)-(2-ethoxyphenyl)thio](3-fluorophenyl)methyl]-, hydrochloride, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

667876-87-1P 667876-89-3P 667877-03-4P
667877-09-0P 667877-11-4P 667877-16-9P
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (prepn. of benzyl morpholine deriva. as selective inhibitors of serotonin and norepinephrine reuptake)

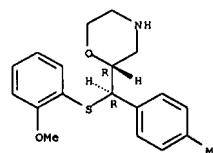
RN 667876-62-2 CAPLUS
CN Morpholine, 2-[(R)-(2-fluorophenyl)][(2-methoxyphenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



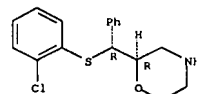
RN 667876-69-9 CAPLUS
CN Morpholine, 2-[(R)-(2-methoxyphenyl)thio](4-methylphenyl)methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



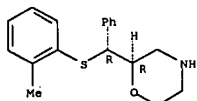
RN 667876-72-4 CAPLUS
CN Morpholine, 2-[(R)-(2-chlorophenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



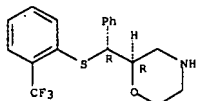
RN 667876-74-6 CAPLUS
CN Morpholine, 2-[(R)-(2-methylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



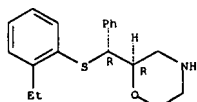
RN 667876-81-5 CAPLUS
CN Morpholine, 2-[(R)-phenyl[[2-(trifluoromethyl)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



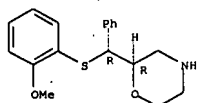
RN 667876-85-9 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

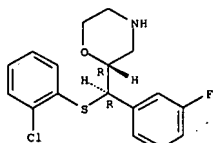


RN 667876-87-1 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

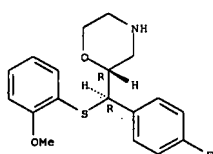


RN 667876-89-3 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylthio)phenyl]thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)



RN 667877-16-9 CAPLUS
CN Morpholine, 2-[(R)-[(4-fluorophenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

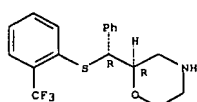
Relative stereochemistry.



IT 667876-40-6P
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compound; preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)

RN 667876-40-6 CAPLUS
CN Morpholine, 2-[(R)-phenyl[[2-(trifluoromethyl)phenyl]thio]methyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

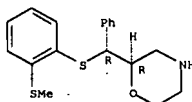
Absolute stereochemistry.



• HCl

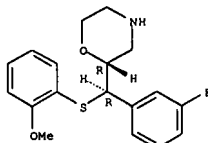
IT 667876-27-9P 667876-37-1P 667876-42-8P

Relative stereochemistry.



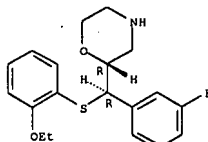
RN 667877-03-4 CAPLUS
CN Morpholine, 2-[(R)-[(3-fluorophenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667877-09-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethoxyphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667877-11-4 CAPLUS
CN Morpholine, 2-[(R)-[(2-chlorophenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

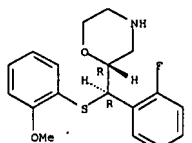
Relative stereochemistry.

667876-44-0P 667876-50-8P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(target compd.; prepn. of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)

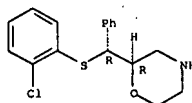
RN 667876-27-9 CAPLUS
CN Morpholine, 2-[(R)-[(2-fluorophenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



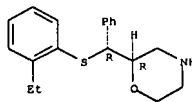
RN 667876-37-1 CAPLUS
CN Morpholine, 2-[(R)-[(2-chlorophenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



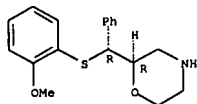
RN 667876-42-8 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethylphenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



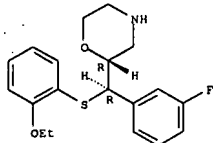
RN 667876-44-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.



RN 667876-50-8 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethoxyphenyl)thio](3-fluorophenyl)methyl]-, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



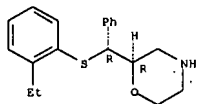
IT 667876-26-8P 667876-36-0P 667876-39-3P
667876-43-9P 667876-45-1P 667876-46-2P
667876-47-3P 667876-48-4P 667876-49-5P
667876-51-9P 667876-54-2P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compound; preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)
RN 667876-26-8 CAPLUS
CN Morpholine, 2-[(R)-[(4-methoxyphenyl)thio](2-methoxyphenyl)methyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 667876-43-9 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethylphenyl)thio]phenylmethyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

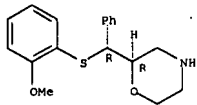
Absolute stereochemistry.



● HCl

RN 667876-45-1 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

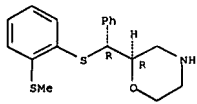
Absolute stereochemistry.



● HCl

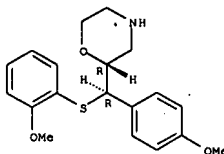
RN 667876-46-2 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylthio)phenyl]thio]phenylmethyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

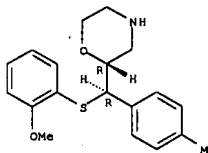
L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

RN 667876-36-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio](4-methylphenyl)methyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

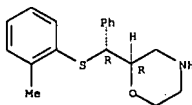
Absolute stereochemistry.



● HCl

RN 667876-39-3 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

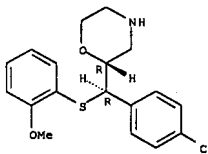


● HCl

L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 667876-47-3 CAPLUS
CN Morpholine, 2-[(R)-[(4-chlorophenyl)thio](2-methoxyphenyl)methyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

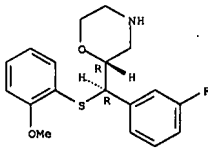
Absolute stereochemistry.



● HCl

RN 667876-48-4 CAPLUS
CN Morpholine, 2-[(R)-[(3-fluorophenyl)thio](2-methoxyphenyl)methyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

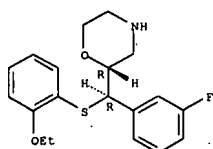
Absolute stereochemistry.



● HCl

RN 667876-49-5 CAPLUS
CN Morpholine, 2-[(R)-[(2-ethoxyphenyl)thio](3-fluorophenyl)methyl]-, hydrochloride, (2R)-(9CI) (CA INDEX NAME)

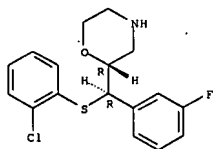
Absolute stereochemistry.



● HCl

RN 667876-51-9 CAPLUS
CN Morpholine, 2-[(R)-[(2-chlorophenyl)thio](3-fluorophenyl)methyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

RN 667876-54-2 CAPLUS
CN Morpholine, 2-[(R)-[(4-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

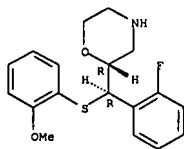
Absolute stereochemistry.

L15 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(target compd.; prepn. of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)

RN 667876-28-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-fluorophenyl)[(2-methoxyphenyl)thio]methyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

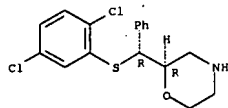
Absolute stereochemistry.



● HCl

RN 667876-30-4 CAPLUS
CN Morpholine, 2-[(R)-[(2,5-dichlorophenyl)thio]phenylmethyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

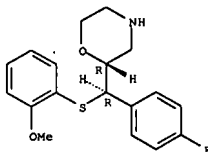
Absolute stereochemistry.



● HCl

RN 667876-34-8 CAPLUS
CN Morpholine, 2-[(R)-[(2,6-dichlorophenyl)thio]phenylmethyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

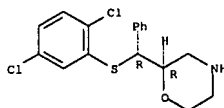
IT 667876-32-6P 667876-52-0P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(target compound; preparation of benzyl morpholine derivs. as selective inhibitors of serotonin and norepinephrine reuptake)

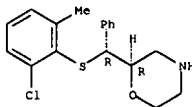
RN 667876-32-6 CAPLUS
CN Morpholine, 2-[(R)-[(2,5-dichlorophenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

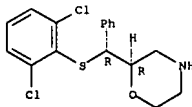


RN 667876-52-0 CAPLUS
CN Morpholine, 2-[(R)-[(2-chloro-6-methylphenyl)thio]phenylmethyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



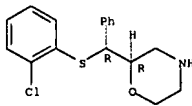
IT 667876-28-0P 667876-30-4P 667876-34-8P
667876-38-2P 667876-53-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU



● HCl

RN 667876-38-2 CAPLUS
CN Morpholine, 2-[(R)-[(2-chlorophenyl)thio]phenylmethyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

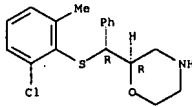
Absolute stereochemistry.



● HCl

RN 667876-53-1 CAPLUS
CN Morpholine, 2-[(R)-[(2-chloro-6-methylphenyl)thio]phenylmethyl]-, hydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

REFERENCE COUNT:
FORMAT

2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

DOCUMENT NUMBER:

TITLE:

INVENTOR(S):
Gallagher,

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

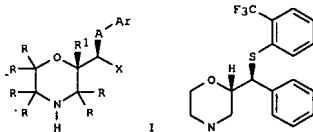
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004017977	A2	20040304	WO 2003-US23269	20030818
WO 2004017977	A3	20040401		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	CH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003269923	A1	20040311	AU 2003-269923	20030818
EP 1534291	A2	20050601	EP 2003-751812	20030818
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
US 2006035894	A1	20060216	US 2005-524650	20050217
PRIORITY APPLN. INFO.:			GB 2002-19690	A 20020823
			US 2002-415328P	P 20021001
			WO 2003-US23269	W 20030818

OTHER SOURCE(S):
GI

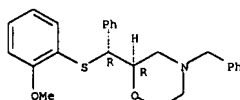
MARPAT 140:235724



AB Title comps. I [A = S or O; Ar = (un)substituted Ph optionally

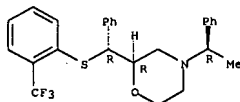
L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CN Morpholine, 2-[(R)-[(2-methoxyphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



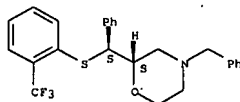
RN 668470-88-0 CAPLUS
CN Morpholine, 4-[(1R)-1-phenylethyl]-2-[(R)-phenyl]2-(trifluoromethyl)phenylthio]methyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



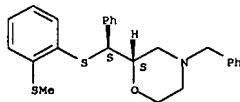
RN 668470-89-1 CAPLUS
CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl]2-(trifluoromethyl)phenylthio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-90-4 CAPLUS
CN Morpholine, 2-[(S)-[(2-methylthio)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
substituted with 1-5 substituents selected from alkyl, alkoxy, alkylthio, halo, etc.; X = (un)substituted Ph optionally substituted with 1-5 substituents selected from halo, alkyl, alkoxy, cycloalkyl, etc.; R1 = H or alkyl; R = independently H or alkyl; each mentioned alkyl may be optionally substituted with one or more halo atoms; with provisions that when A = O, X = an alkyl group, a cycloalkyl group or cycloalkylmethyl group and pharmaceutically acceptable salts thereof are prepd. and disclosed as inhibitors of serotonin and norepinephrine reuptake. Thus, e.g., II was prepd. via substitution of

(2S)-2-[(R)-bromo(phenyl)methyl]-4-(phenylmethyl)morpholine (prepn. given) with 2-trifluoromethylthiophenol with subsequent debenzoylation. I have been found to exhibit a Ki value less than 500nM at the norepinephrine transporter as detd. by scintillation proximity assays. In addn., I have been found to selectively inhibit norepinephrine transporter relative to the serotonin and dopamine transporters by a factor of at least five.

IT 667876-61-1P 667876-73-5P 667876-86-0P
668470-88-0P 668470-89-1P 668470-90-4P
668470-91-5P 668470-92-6P 668470-93-7P
668470-94-8P 668470-95-9P 668470-97-1P
668470-99-3P 668471-00-9P 668471-02-1P
668471-04-3P 668471-08-7P

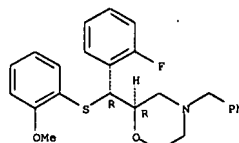
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate) preparation of benzyl morpholine derivs. as selective inhibitors of norepinephrine reuptake)

RN 667876-61-1 CAPLUS

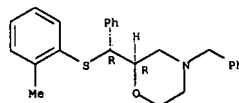
CN Morpholine, 2-[(R)-[(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667876-73-5 CAPLUS
CN Morpholine, 2-[(R)-[(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

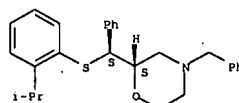
Relative stereochemistry.



RN 667876-86-0 CAPLUS

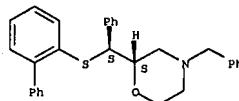
L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 668470-91-5 CAPLUS
CN Morpholine, 2-[(S)-[(2-methylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



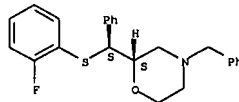
RN 668470-92-6 CAPLUS
CN Morpholine, 2-[(S)-[(1,1'-biphenyl)-2-ylthio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



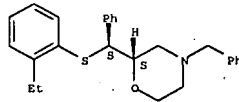
RN 668470-93-7 CAPLUS
CN Morpholine, 2-[(S)-[(2-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



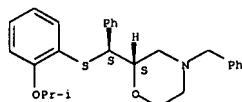
RN 668470-94-8 CAPLUS
CN Morpholine, 2-[(S)-[(2-ethylphenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



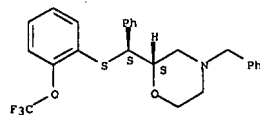
L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 RN 668470-95-9 CAPLUS
 CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



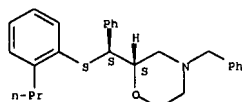
RN 668470-97-1 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(R)-phenyl[[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 668470-99-3 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[(S)-phenyl[[2-(propylphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

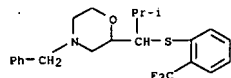
Absolute stereochemistry.



RN 668471-00-9 CAPLUS
 CN Benzoic acid, 2-[[[(R)-phenyl[(2R)-4-(phenylmethyl)-2-morpholinyl]methyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

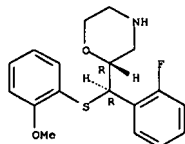
Relative stereochemistry.

L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



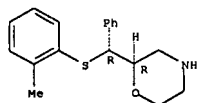
IT 667876-62-2P 667876-74-6P 667876-85-9P
 667876-87-1P 668470-96-0P 668470-98-2P
 668471-01-0P 668471-03-2P 668471-05-4P
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (preparation of benzyl morpholine derivs. as selective inhibitors of norepinephrine reuptake)
 RN 667876-62-2 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-fluorophenyl)thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 667876-74-6 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-methylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

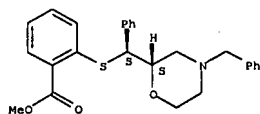
Relative stereochemistry.



RN 667876-85-9 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-ethylphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

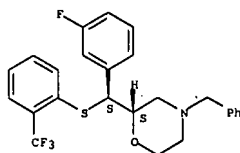
Relative stereochemistry.

L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



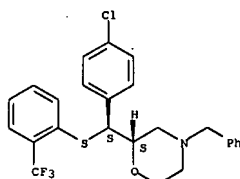
RN 668471-02-1 CAPLUS
 CN Morpholine, 2-[(R)-[2-(3-fluorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



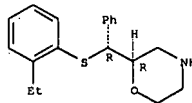
RN 668471-04-3 CAPLUS
 CN Morpholine, 2-[(R)-[2-(4-chlorophenyl)thio]phenylmethyl]-4-(phenylmethyl)-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



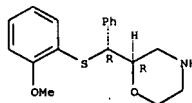
RN 668471-08-7 CAPLUS
 CN Morpholine, 2-[2-methyl-1-[[2-(trifluoromethyl)phenyl]thio]propyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)

L15 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



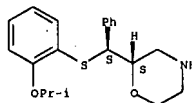
RN 667876-87-1 CAPLUS
 CN Morpholine, 2-[(R)-[2-(2-methoxyphenyl)thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



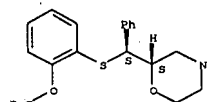
RN 668470-96-0 CAPLUS
 CN Morpholine, 2-[(R)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



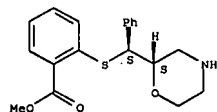
RN 668470-98-2 CAPLUS
 CN Morpholine, 2-[(R)-phenyl[[2-(trifluoromethoxy)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



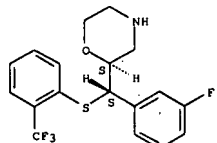
RN 668471-01-0 CAPLUS
 CN Benzoic acid, 2-[[[(R)-[2-(2-morpholinyl)phenylmethyl]thio]-, methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



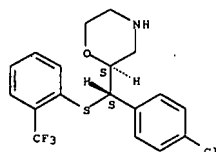
RN 668471-03-2 CAPLUS
CN Morpholine, 2-[(R)-(3-fluorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

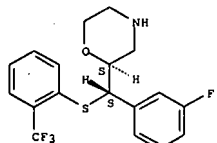


RN 668471-05-4 CAPLUS
CN Morpholine, 2-[(R)-(4-chlorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-, (2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

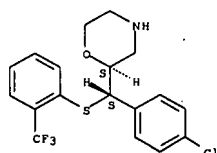


IT 668470-64-2P 668470-67-5P 668470-72-2P
668470-74-4P 668470-76-6P 668470-78-8P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(target compound; preparation of benzyl morpholine derivs. as selective



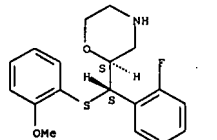
RN 668470-76-6 CAPLUS
CN Morpholine, 2-[(S)-(4-chlorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-78-8 CAPLUS
CN Morpholine, 2-[(S)-(2-fluorophenyl)][2-(methoxyphenyl)thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

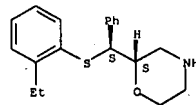
Absolute stereochemistry.



IT 668470-66-4P 668470-69-7P 668470-70-0P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(target compound; preparation of benzyl morpholine derivs. as selective inhibitors of norepinephrine reuptake)
RN 668470-66-4 CAPLUS
CN Morpholine, 2-[(S)-(2-methoxyphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

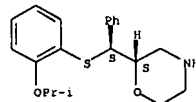
inhibitors of norepinephrine reuptake)
RN 668470-64-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(ethylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



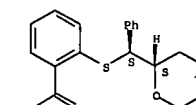
RN 668470-67-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethoxy)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-72-2 CAPLUS
CN Benzoic acid, 2-[(S)-(2S)-2-morpholinylphenylmethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

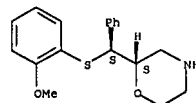
Absolute stereochemistry.



RN 668470-74-4 CAPLUS
CN Morpholine, 2-[(S)-(3-fluorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

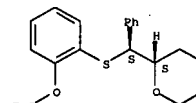
Absolute stereochemistry.

Absolute stereochemistry.



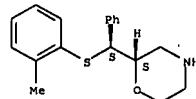
RN 668470-69-7 CAPLUS
CN Morpholine, 2-[(S)-phenyl][2-(trifluoromethoxy)phenyl]thio]methyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



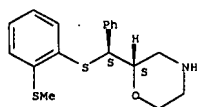
RN 668470-70-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylphenyl)thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



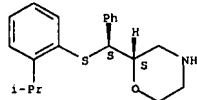
IT 668470-57-3P 668470-59-5P 668470-61-9P
668470-80-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(target compound; preparation of benzyl morpholine derivs. as selective inhibitors of norepinephrine reuptake)
RN 668470-57-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(methylthio)phenyl]thio]phenylmethyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



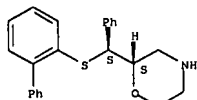
RN 668470-59-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

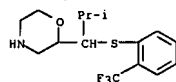


RN 668470-61-9 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

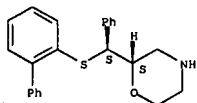


RN 668470-80-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)



IT 668470-56-2P 668470-58-4P 668470-60-8P
668470-62-0P 668470-63-1P 668470-65-3P
668470-68-6P 668470-71-1P 668470-73-3P
668470-75-5P 668470-77-7P 668470-79-9P
668470-81-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

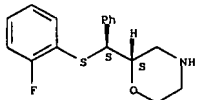
Absolute stereochemistry.



● HCl

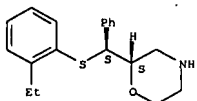
RN 668470-63-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-65-3 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



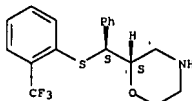
● HCl

RN 668470-68-6 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

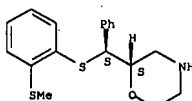
(target compd.; prepn. of benzyl morpholine derivs. as selective inhibitors of norepinephrine reuptake)
RN 668470-56-2 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-58-4 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

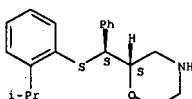
Absolute stereochemistry.



● HCl

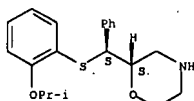
RN 668470-60-8 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

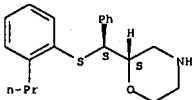
RN 668470-62-0 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)



● HCl

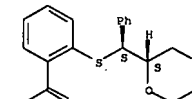
RN 668470-71-1 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 668470-73-3 CAPLUS
CN Benzoic acid, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

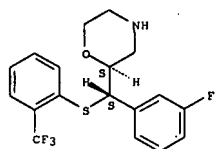
Absolute stereochemistry.



● HCl

RN 668470-75-5 CAPLUS
CN Morpholine, 2-[(S)-[2-(1-methylethyl)phenyl]thio]phenylmethyl-, (2S)-(9CI) (CA INDEX NAME)

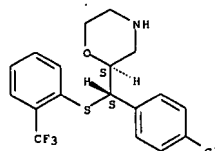
Absolute stereochemistry.



● HCl

RN 668470-77-7 CAPLUS
 CN Morpholine, 2-[(S)-(4-chlorophenyl)][2-(trifluoromethyl)phenyl]thio]methyl
]-, hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

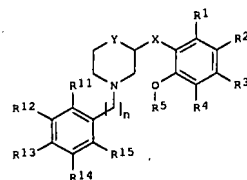
RN 668470-79-9 CAPLUS
 CN Morpholine, 2-[(S)-(2-fluorophenyl)][2-(methoxyphenyl)thio]methyl]-
 hydrochloride, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

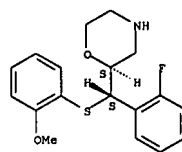
ACCESSION NUMBER: 1998:147318 CAPLUS
 DOCUMENT NUMBER: 128:204912
 TITLE: Preparation of disubstituted morpholines, oxazepines
 or thiazepines as dopamine D4 receptor antagonists
 INVENTOR(S): Axelsson, Oskar; Peters, Dan; Scheel-Kruger, Jorgen;
 Ostergaard, Nielsen Elsebet
 PATENT ASSIGNEE(S): Neufosch A/S, Den.; Axelsson, Oskar; Peters, Dan;
 Scheel-Kruger, Jorgen; Ostergaard Nielsen, Elsebet
 SOURCE: PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9807710	A1	19980226	WO 1997-EP4587	19970822
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: CH, KE, LS, MW, SO, ZW, AT, BE, BG, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744553	A	19980306	AU 1997-44553	19970822
EP 920423	A1	19990609	EP 1997-942872	19970822
EP 920423	B1	20050126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 287878	T	20050215	AT 1997-942872	19970822
US 6207662	B1	20010327	US 1999-242693	19990223
US 6479491	B1	20021112	US 2000-709297	20001113
DK 1996-883 A 19960823				
WO 1997-EP4587 W 19970822				
US 1999-242693 A3 19990223				

OTHER SOURCE(S): MARPAT 128:204912
 G1



I

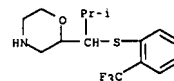


● HCl

RN 668470-81-3 CAPLUS
 CN Morpholine, 2-[(2-methyl-1-[(2-(trifluoromethyl)phenyl)thio]propyl)-
 (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

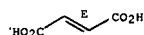
CRN 668470-80-2
 CMF C15 H20 F3 N O S



CM 2

CRN 110-17-8
 CMF C4 H4 O4

Double bond geometry as shown.

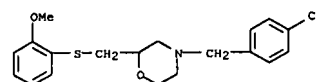


AB The title compds. [1: R1-R4, R11-R15 = H, alkyl, alkoxy, halo, etc.; R5 =
 H, alkyl, alkoxyalkyl, phenylalkyl; X = CH2, ECH2, NHCO, CONH, CH:CH
 (wherein Z = O, S, CH2, NH); Y = O, CH2W, NCH2 (wherein W = O, S); n =
 0-2] and their pharmaceutically acceptable acid addition salts and
 enantiomers, useful in the treatment of psychotic disorders such as
 schizophrenia, were prepared. Thus, reaction of 4-(4-chlorobenzyl)-2-
 chloromethylmorpholine with 4-chloro-2-methoxyphenol in the presence of
 EtOK and 18-crown-6 in PhMe afforded 57% I [R1, R2, R4, R11, R12, R14,
 R15
 = H; R3 = R13 = Cl; R5 = Me; X = CH2O; Y = O; n = 1] which showed IC50 of
 0.004 μM against dopamine receptor D4 binding.
 IT 203862-20-8P
 RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological
 study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of disubstituted morpholines, oxazepines or thiazepines
 as
 dopamine D4 receptor antagonists).

RN 203862-20-8 CAPLUS
 CN Morpholine, 4-[(4-chlorophenyl)methyl]-2-[(2-methoxyphenyl)thio]methyl]-,
 ethanedioate (1:1) (9CI) (CA INDEX NAME)

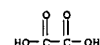
CM 1

CRN 203862-19-5
 CMF C19 H22 Cl N O2 S



CM 2

CRN 144-62-7
 CMF C2 H2 O4



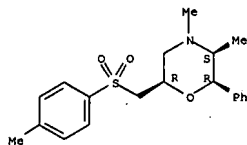
REFERENCE COUNT: 18
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 FORMAT

THERE ARE 18 CITED REFERENCES AVAILABLE FOR
 RECORD. ALL CITATIONS AVAILABLE IN THE RE

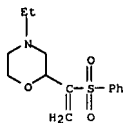
L15 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:607465 CAPLUS
 DOCUMENT NUMBER: 115:207465
 TITLE: A simple method for the synthesis of
 y-functionalized vinyl and allyl sulfones
 AUTHOR(S): Najera, Carmen; Perez-Pinar, Alfonso; Sansano, Jose
 M.
 CORPORATE SOURCE: Fac. Cienc., Univ. Alicante, Alicante, 03690, Spain
 SOURCE: Tetrahedron (1991), 47(32), 6337-52
 CODEN: TETRAH; ISSN: 0040-4020
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 115:207465
 AB The synthesis of y-functionalized vinyl sulfones
 p-MeC6H4SO2CR:CR1CHR2R3 (I, R = R2 = H, Me; RR2 = (CH2)3, R1 = H; R3 =

Br, MeO, N3, morpholino, etc.) was carried out directly starting from dibromides p-MeC6H4SO2CHRCR1BrCHR2Br II derived from allyl sulfones by reaction with different nucleophiles. The process is stereoselective affording compds. I with E configuration except in the case of methallylic derivs. The regioisomeric y-functionalized allyl sulfones p-MeC6H4SO2CH2CH:CR2R3 were obtained from dibromides II or from vinyl sulfones I with Z configuration, except when triphenylphosphine was used as nucleophile, in this case the corresponding (E)-vinylphosphonium bromide was obtained.
 IT 136908-45-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 136908-45-7 CAPLUS
 CN Morpholine, 3,4-dimethyl-6-[[[(4-methylphenyl)sulfonyl]methyl]-2-phenyl-, [2R-(2a,3a,6a)]- (9CI) (CA INDEX NAME)

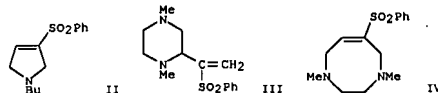
Absolute stereochemistry.



L15 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L15 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:478071 CAPLUS
 DOCUMENT NUMBER: 113:78071
 TITLE: A [4 + 1] annulation approach to nitrogen
 heterocycles
 using 2,3-bis(phenylsulfonyl)-1,3-butadiene and
 primary amines
 AUTHOR(S): Padwa, Albert; Norman, Bryan H.
 CORPORATE SOURCE: Dep. Chem., Emory Univ., Atlanta, GA, 30322, USA
 SOURCE: Journal of Organic Chemistry (1990), 55(16), 4601-7
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 113:78071
 GI



AB The reaction of amines with the title compound (I) affords pyrrolidines
 in high yield. The formation of the pyrrolidine involves initial conjugate
 addition followed by a 5-endo-trig cyclization of the resulting amine
 onto the adjacent vinyl sulfone. Treatment of these pyrrolidines with NaOMe
 induces elimination of PhS(O)OH, producing the 3-pyrroline ring system.
 Heating a sample of the resulting 3-pyrroline in the presence of DDQ
 smoothly affords 3-(phenylsulfonyl)-substituted pyrroles. E.g., BUH2
 and I give 93% pyrroline II, which is oxidized to the corresponding pyrrole.
 Treatment of these pyrroles with Me3CLi readily generates 2-lithiated
 pyrroles which can be quenched with electrophiles such as MeI, PhCHO,
 BzCl, Me2NCHO, and CH2:CMCO2Me. In all cases high yields of
 N-alkyl-2,3-disubstituted pyrroles are obtained. The reaction of I with
 MeNHCH2CH2NHMe proceeds by 2 competitive pathways leading to both 6- and
 8-membered rings III and IV, resp. under kinetic conditions. Upon
 stirring for longer periods of time, IV undergoes a ring contraction to
 give the thermodynamically more stable III.
 IT 128023-40-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 128023-40-5 CAPLUS
 CN Morpholine, 4-ethyl-2-[1-(phenylsulfonyl)ethenyl]- (9CI) (CA INDEX NAME)

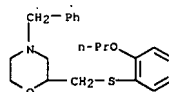
L15 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1975:170982 CAPLUS
 DOCUMENT NUMBER: 82:170982
 TITLE: Antidepressant
 2-[[[(2-alkoxyphenyl)thio]methyl]morphol
 inas
 INVENTOR(S): Young, Edwin Harry P.
 PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd., UK
 SOURCE: Ger. Offen., 14 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2436398	A1	19750220	DE 1974-2436398	19740729
GB 1412546	A	19751105	GB 1973-37589	19740701
			GB 1973-37589	A 19730808

GI For diagram(s), see printed CA Issue.
 AB Five morpholines I (R = Me, Et, Pr, Bu, or Ph; R1 = H) and their salts
 were prepared by debenzoylation of I (R1 = CH2Ph) or by reaction of
 2-ROC6H4SH with NaH and 2-[[[(4-tolylsulfonyl)oxy]methyl]morpholine in
 DMF.
 I (orally) had antidepressant activity in mice.
 IT 55710-08-2P 55710-14-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and debenzoylation of)
 RN 55710-08-2 CAPLUS
 CN Morpholine, 4-(phenylmethyl)-2-[[[(2-propoxyphenyl)thio]methyl]-,
 ethanedioate (9CI) (CA INDEX NAME)

CM 1

CRN 55710-07-1
 CMF C21 H27 N O2 S

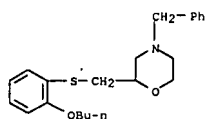


CM 2

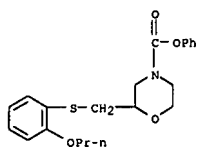
CRN 144-62-7
 CMF C2 H2 O4



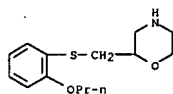
L15 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 RN 55710-14-0 CAPLUS
 CN Morpholine, 2-[[[(2-butoxyphenyl)thio]methyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



IT 55710-09-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and hydrolysis of)
 RN 55710-09-3 CAPLUS
 CN 4-Morpholinecarboxylic acid, 2-[[[(2-propoxyphenyl)thio]methyl]-, phenyl ester (9CI) (CA INDEX NAME)



IT 55710-10-6P 55710-12-8P 55710-13-9P
 55710-15-1P 55710-16-2P 55710-18-4P
 55710-20-8P 55710-21-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 55710-10-6 CAPLUS
 CN Morpholine, 2-[[[(2-propoxyphenyl)thio]methyl]-, hydrochloride (9CI) (CA INDEX NAME)



● HCl

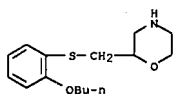
RN 55710-12-8 CAPLUS

L15 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 55710-16-2 CAPLUS
 CN Morpholine, 2-[[[(2-butoxyphenyl)thio]methyl]-, ethanedioate (9CI) (CA INDEX NAME)

CM 1

CRN 55710-15-1
 CMF C15 H23 N O2 S



CM 2

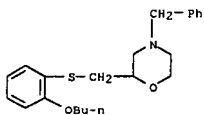
CRN 144-62-7
 CMF C2 H2 O4



RN 55710-18-4 CAPLUS
 CN Morpholine, 2-[[[(2-butoxyphenyl)thio]methyl]-4-(phenylmethyl)-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

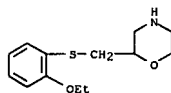
CRN 55710-14-0
 CMF C22 H29 N O2 S



CM 2

CRN 144-62-7
 CMF C2 H2 O4

L15 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 CN Morpholine, 2-[[[(2-ethoxyphenyl)thio]methyl]-, hydrochloride (9CI) (CA INDEX NAME)

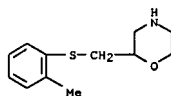


● HCl

RN 55710-13-9 CAPLUS
 CN Morpholine, 2-[[[(2-methylphenyl)thio]methyl]-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55723-00-7
 CMF C12 H17 N O S

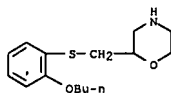


CM 2

CRN 144-62-7
 CMF C2 H2 O4



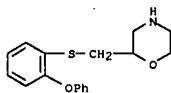
RN 55710-15-1 CAPLUS
 CN Morpholine, 2-[[[(2-butoxyphenyl)thio]methyl]- (9CI) (CA INDEX NAME)



L15 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



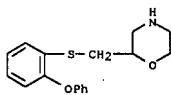
RN 55710-20-8 CAPLUS
 CN Morpholine, 2-[[[(2-phenoxyphenyl)thio]methyl]- (9CI) (CA INDEX NAME)



RN 55710-21-9 CAPLUS
 CN Morpholine, 2-[[[(2-phenoxyphenyl)thio]methyl]-, ethanedioate (9CI) (CA INDEX NAME)

CM 1

CRN 55710-20-8
 CMF C17 H19 N O2 S



CM 2

CRN 144-62-7
 CMF C2 H2 O4

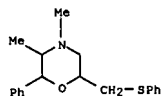


L15 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1961:54380 CAPLUS
DOCUMENT NUMBER: 55:54380
ORIGINAL REFERENCE NO.: 55:10481e-1,10482a-c
TITLE: Morpholine compounds
INVENTOR(S): Zimmermann, Markus; Haefliger, Franz
PATENT ASSIGNEE(S): J. R. Geigy Akt.-Ges.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 851311		19601012	GB 1958-10539	19580402

AB The title compds. had valuable neurophysiol. properties and could be used as intermediates in the production of other compds. with similar properties. Glycide 7.4 and L-ephedrine (I) 16.5 added to H₂O 0.5, the mixture heated 15 hrs. at 90°, the cooled resin dissolved in Et₂O 200, a solution of H₂SO₄ 9.8 in Et₂O 100 added at 0°, the Et₂O distilled, the residue mixed at 0° with H₂SO₄ 100 parts, the solution poured on ice after 2-3 hrs., the mixture extracted with Et₂O, NaOH added to the aqueous phase to an alkaline reaction, the mixture extracted with Et₂O, and the extract dried and distilled gave 2-phenyl-3,4-dimethyl-6-hydroxymethylmorpholine. The following substituted morpholines were similarly prepared [substituent, b.p./mm., and (parts) given]: 2-phenyl-3,4-dimethyl-6-ethoxymethyl, 92-4°/0.03, from I (16.5) and glycide Et ether (10.2); 2-phenyl-3,4-dimethyl-5,6-tetramethylene, 9-93°/0.02 (sic), from I (16.5) and cyclohexene oxide (9.8); 2-phenyl-3,4-dimethyl-6-decyl, 139-40°/0.0001, from I (16.5) and 1,2-epoxydodecane (II) (20.3); and 2-(p-chlorophenyl)-3-methyl-6-decyl, 150-2°/0.0005, from 1-(p-chlorophenyl)-2-aminopropanol (18.5) and II (20.3). I 16.5 and propylene oxide (III) 7 parts heated 5 hrs. at 80-90° in a sealed tube and then worked up as in the 1st example gave 2-phenyl-3,4,6-trimethylmorpholine, b.p. 05 71-2.5°, [α]_D 20 34.8° (c 1.349, CHCl₃); picrate m. 167-72°. 2-(3',4'-Dimethylphenyl)-3,6-dimethylmorpholine was similarly obtained from 1-(3',4'-dimethylphenyl)-2-aminopropanol 17.9, III 6, and H₂O 0.5 part. 1-(p-Hydroxyphenyl)-2-methyl-aminoethanol 16.7 dissolved in HCONMe₂ 100 and H₂O 1 at 100-10°, benzyl ethylene oxide 13.4 added, the mixture heated 20 hrs. at 100-10° and evaporated to dryness in vacuo, and the residue dissolved in 48% HBr 130 parts gave 2-(4'-hydroxyphenyl)-4-methyl-6-benzylmorpholine. I 15, 3-phenoxy-1,2-epoxypropane 13.5, and H₂O 1 heated at 50° until dissolved and then 14 hrs. at 100°, the crude product 25 dissolved in iso-PrOH-HCl, the solution evaporated to dryness in vacuo, p-MeC₆H₄SO₃H 0.5 part added to the residue, the mixture heated 10 hrs. at 170°/30-50 mm., and the residue dissolved in aqueous K₂CO₃ and extracted with Et₂O gave 2-phenyl-3,4-dimethyl-6-phenoxyethylmorpholine, b.p. 0001 117-20°, on distillation of the extract. Similarly, 2-(3',4'-dimethoxyphenyl)-3-methyl-6-phenoxyethylmorpholine was obtained from 1-(3',4'-dimethoxyphenyl)-2-aminopropanol 21.1 and 1-phenoxy-2,3-epoxypropane 15, 2-(4'-methoxyphenyl)-3-methyl-6-vinylmorpholine from 1-(4'-methoxyphenyl)-2-aminopropanol 18.2 and butadiene monoxide 7, and 2-phenyl-3,4-dimethyl-6-phenylthiomethylmorpholine, b.p. 0004 135-8° from I 16.5 and

L15 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
1-phenylthio-2,3-epoxypropane 16.6 parts.
2-Phenyl-5,6-dimethylmorpholine (IV) 7.6, BuOH 90, BuBr 5.5, and K₂CO₃ 6.9 parts heated 24 hrs. at 80-90° with stirring, the mixt. concd. in vacuo, and the aq. soln. of the residue extd. with Et₂O gave on evapn. of the ext. 2-phenyl-4-butyl-5,6-dimethylmorpholine, b.p. 001 81-2°. 2-(3',4'-Dimethylphenyl)-3,6-dimethyl-4-allylmorpholine was similarly prepd. from 2-(3',4'-dimethylphenyl)-3,6-dimethylmorpholine 11 and allyl chloride 3.8 parts. Styrol oxide 48, 1,2-dimethylethanolamine 35.6, and H₂O 2 parts heated 3 hrs. at 40-50° and 15 hrs. at 80-90° gave (3-hydroxy-2-butyl-2-hydroxy-2-phenylethylamine (V), b.p. 0002 106°. V 40 dissolved in H₂SO₄ 200 parts with cooling, and the soln. kept 24 hrs. at room temp., poured into ice H₂O, made alk. with NaOH, and extd. with Et₂O gave IV, b.p. 0007 66°. 102010-06-0P, Morpholine, 3,4-dimethyl-2-phenyl-6-[(phenylthio)methyl]- (preparation of)
RN 102010-06-0 CAPLUS
CN Morpholine, 3,4-dimethyl-2-phenyl-6-[(phenylthio)methyl]- (6CI) (CA INDEX NAME)



=> log y

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

88.55

524.91

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

CA SUBSCRIBER PRICE

-12.48

-12.48

STN INTERNATIONAL LOGOFF AT 12:01:03 ON 21 AUG 2007